

TC-K570/K670/K677ES

SERVICE MANUAL



Photo: TC-K677ES

*Canadian Model
AEP Model
UK Model
E Model*
TC-K570

*US Model
AEP Model*
TC-K670

*US Model
Canadian Model
UK Model*
TC-K677ES

SPECIFICATIONS

Recording system	4-track 2-channel stereo		
Fast-winding time	Approx. 90 sec. (with Sony C-60 cassette)		
Bias Heads	AC bias Erasing head × 1 (S&F head) Recording head × 1 (Permalloy head)		
Motors	Playback head × 1 (LA head) Capstan motor × 1 (DC servo motor) Reel motor × 1 (DC motor) ASIST(mechanical drive) motor × 1 (DC motor)		
Signal-to-noise ratio (at peak level)			
Dolby NR switch	OFF	B-Type ON	C-Type ON
Cassette	Type IV(Sony METAL-SLT/S)	60dB	69 dB
	Type II(Sony UX-S)	59 dB	68 dB
	Type I(Sony HF-S)	57 dB	66 dB
Total harmonic distortion	1.0% (with Sony METAL-SLT/S cassette)		
Frequency response (DOLBY NR OFF)			
Type IV cassette (Sony METAL-SLT/S)	20–21,000 Hz (± 3 dB,IEC) 20–16,000 Hz [± 3 dB 0VU (-4dB) recording]		
Type II cassette (Sony UX-S)	20–19,000 Hz (± 3 dB,IEC)		
Type I cassette (Sony HF-S)	20–17,000 Hz (± 3 dB,IEC)		
Wow and flutter	$\pm 0.09\%$ W.Peak (IEC) 0.05% WRMS (NAB) $\pm 0.14\%$ W.Peak (DIN)		

Model Name Using Similar Mechanism	TC-K620/K650ES
Tape Transport	TC-K570
Mechanism Type	TCM-200V7
	TC-K670
	TCM-200V5
	TC-K677ES
	TCM-200V4

Inputs

Line inputs (phono jacks)	Sensitivity	77.5 mV
	Input impedance	47 k ohms
CD DIRECT INPUT	Input impedance	47 k ohms

Outputs

Line outputs (phono jacks)	Rated output level	0.32 V at a load impedance of 47 k ohms
	Load impedance	Over 10 k ohms
Headphones (stereo phone jack)	Output level	0–1.25 mW at a load impedance of 32 ohms

General

Power requirements US,Canadian model: TC-K570: 120V AC 60Hz 18W
TC-K670, K677ES: 120V AC 60Hz 19W
AEP, Germany model: 220VAC~50/60Hz
UK model: 240VAC~50/60Hz
E model: 120, 220, 240VAC~50/60Hz 18W

Power consumption

19 W

Dimensions

Approx. 430 × 123 × 300 mm (w/h/d)
(17 × 4 7/8 × 11 1/8 inches)

including projecting parts and controls

Weight

Approx. 4.9 kg (10 lbs 13 oz)

Supplied accessories

Audio connecting cords (2)

Design and specifications subject to change without notice.

Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

STEREO CASSETTE DECK
SONY®



Dolby noise reduction manufactured under license from

Dolby Laboratories Licensing Corporation.

"DOLBY" and the double-D symbol are trademarks of

Dolby Laboratories Licensing Corporation.

SAFETY CHECK-OUT

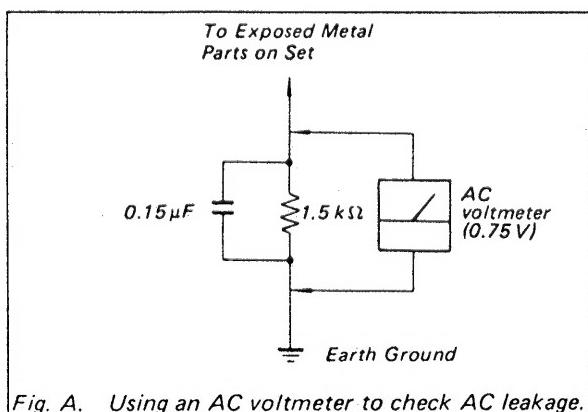
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)



SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

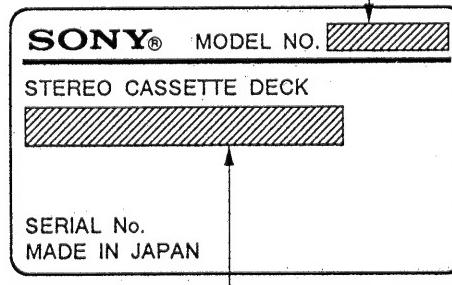
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MODEL IDENTIFICATION

— Specification Label —

TC-K570
TC-K670
TC-K677ES



US,Canadian model: TC-K570: AC120V 60Hz 18W
TC-K670, K677ES: AC120V 60Hz 19W

AEP, Germany model: AC220V~50/60Hz

UK model: AC240V~50/60Hz

E model: AC120, 220, 240V~50/60Hz 18W

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

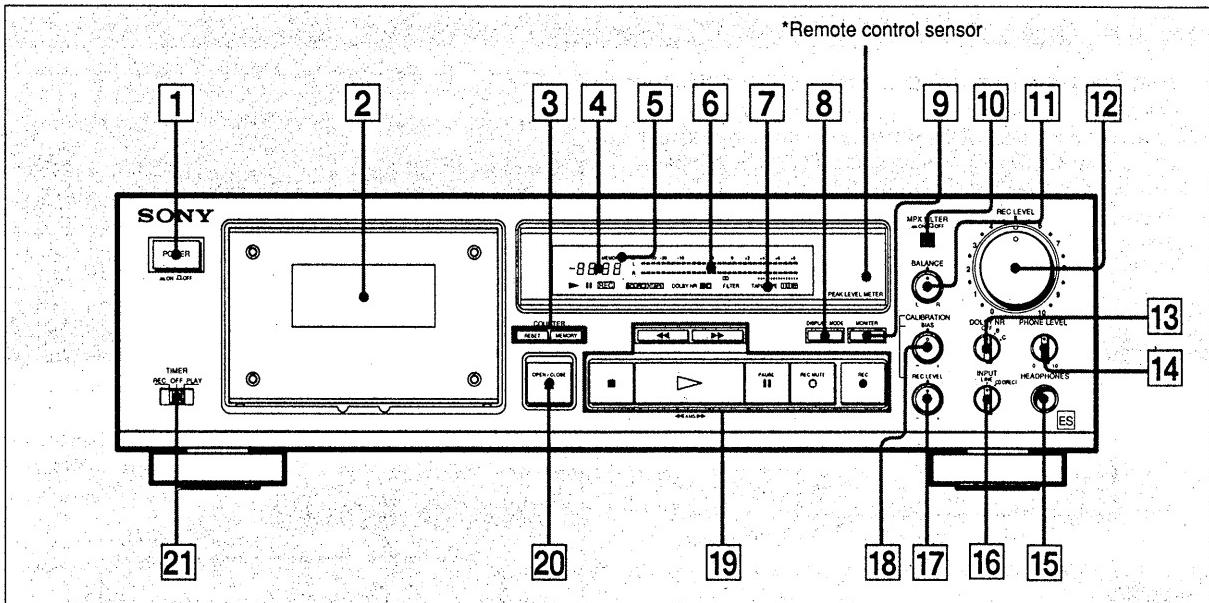
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1

GENERAL

This section is extracted
from instruction manual.

Identification of Front Panel Parts



For details, refer to the page number indicated in ●.

- | | |
|--|---|
| <p>1 POWER switch</p> <p>2 Cassette holder</p> <p>3 Counter buttons
RESET button ⑨
MEMORY button ⑨</p> <p>4 LINEAR COUNTER ⑨</p> <p>5 MEMORY indicator ⑧</p> <p>6 PEAK LEVEL METER ⑪</p> <p>7 TAPE TYPE indicator ⑦</p> <p>8 DISPLAY MODE button ⑦</p> <p>9 MONITOR button ⑪</p> <p>10 MPX FILTER switch ⑪</p> <p>11 BALANCE control ⑩</p> <p>12 REC (recording) LEVEL control ⑩ ⑪</p> <p>13 DOLBY NR (noise reduction) switch ⑦ ⑩</p> <p>14 PHONE (headphones) LEVEL control ⑦</p> <p>15 HEADPHONES jack (stereo phone jack) ⑦</p> <p>16 INPUT selector ⑩</p> | <p>17 REC (recording) LEVEL control for calibration ⑫</p> <p>18 BIAS control ⑫</p> <p>19 Tape operation buttons
◀◀ (rewind) button
▶▶ (fast-forward) button
■ (stop) button
▶ (play) button
■ PAUSE button
○ REC MUTE (record muting) button ⑬
● REC (recording) button</p> <p>20 ▲ OPEN/CLOSE button</p> <p>21 TIMER switch ⑭</p> |
|--|---|

***Remote control sensor**

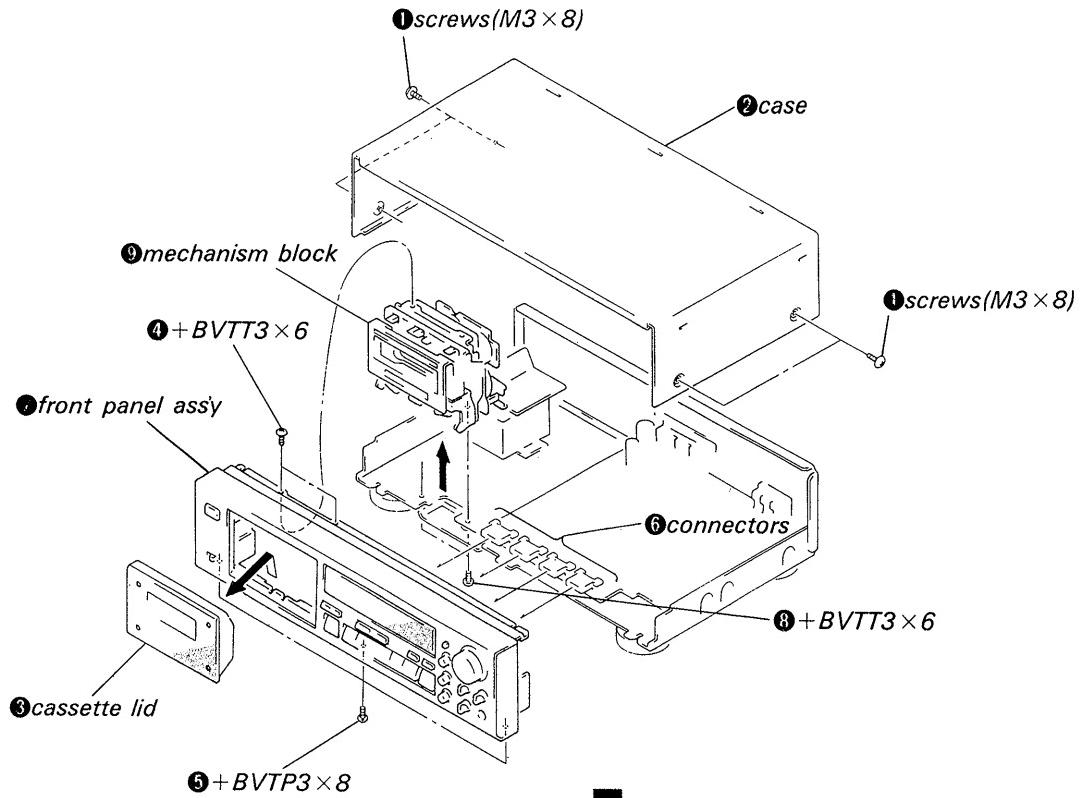
You can remotely control this cassette deck with:

- A remote commander that came with a Sony amplifier or receiver if it has the mark and cassette deck control capability.
- An optional Sony remote commander with the mark and cassette deck control capability.

SECTION 2 DISASSEMBLY

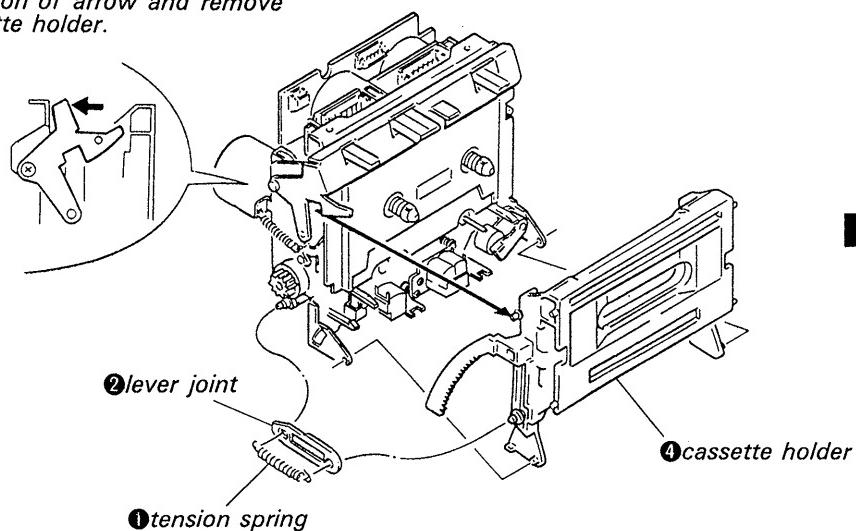
Note: Follow the disassembly procedure in the numerical order given.

MECHANISM BLOCK

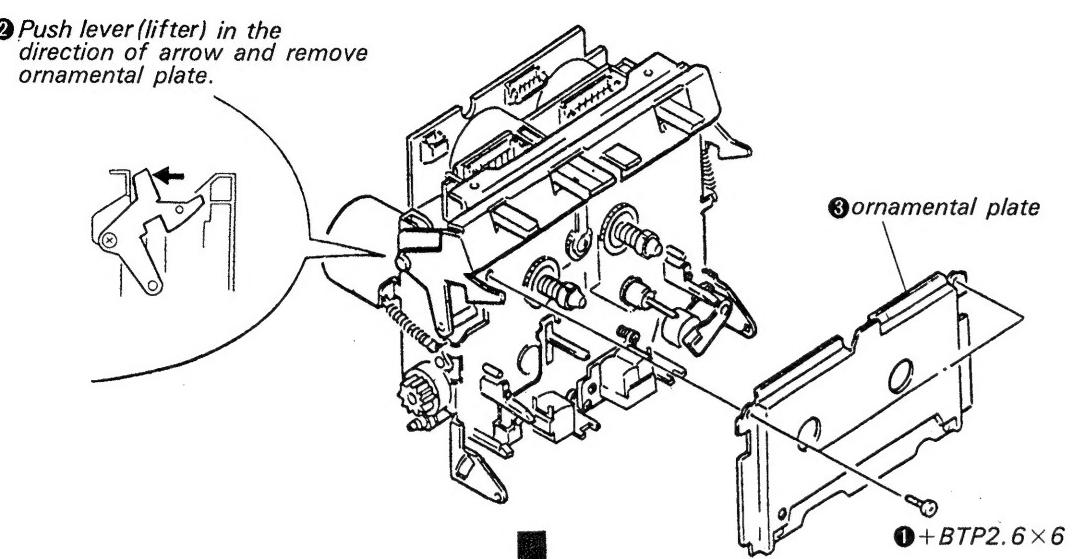
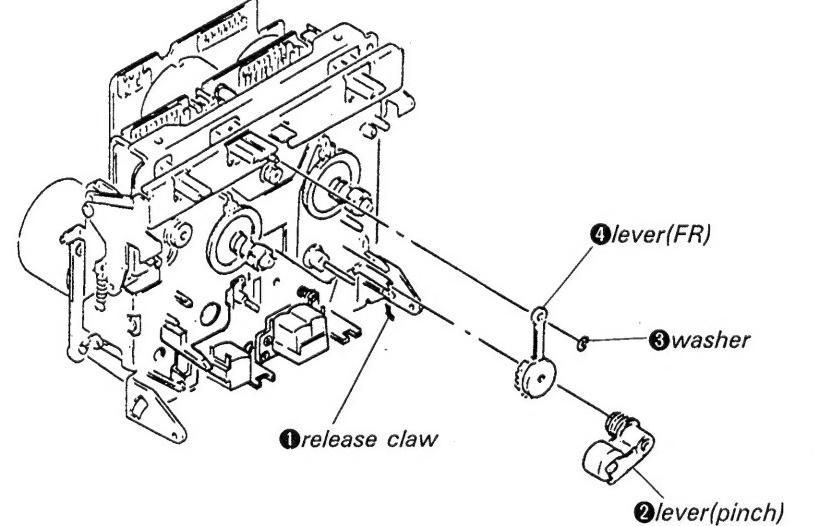
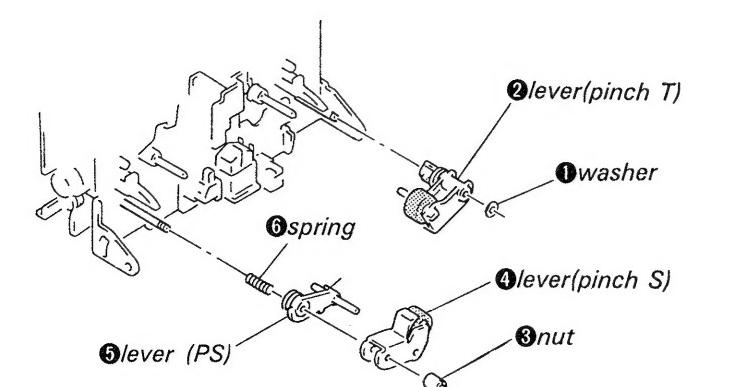
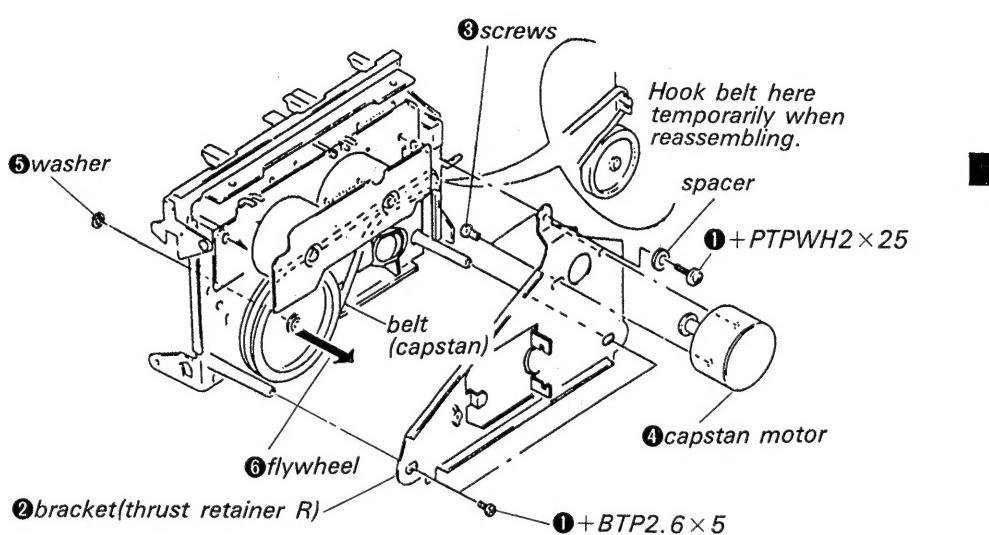
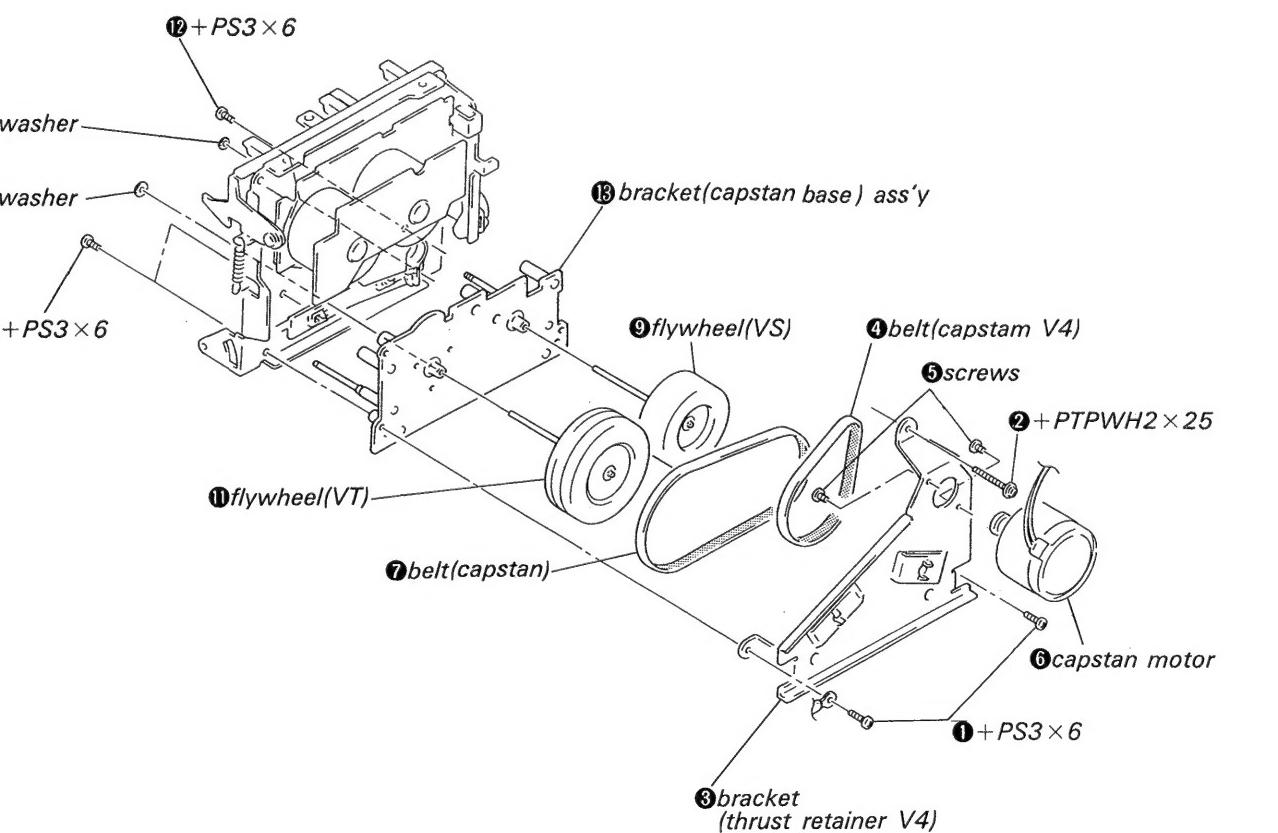


CASSETTE HOLDER

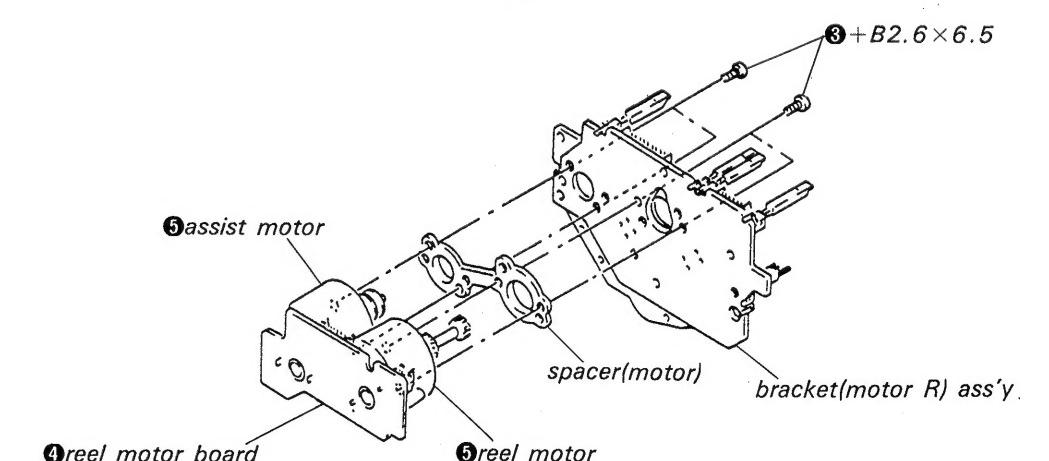
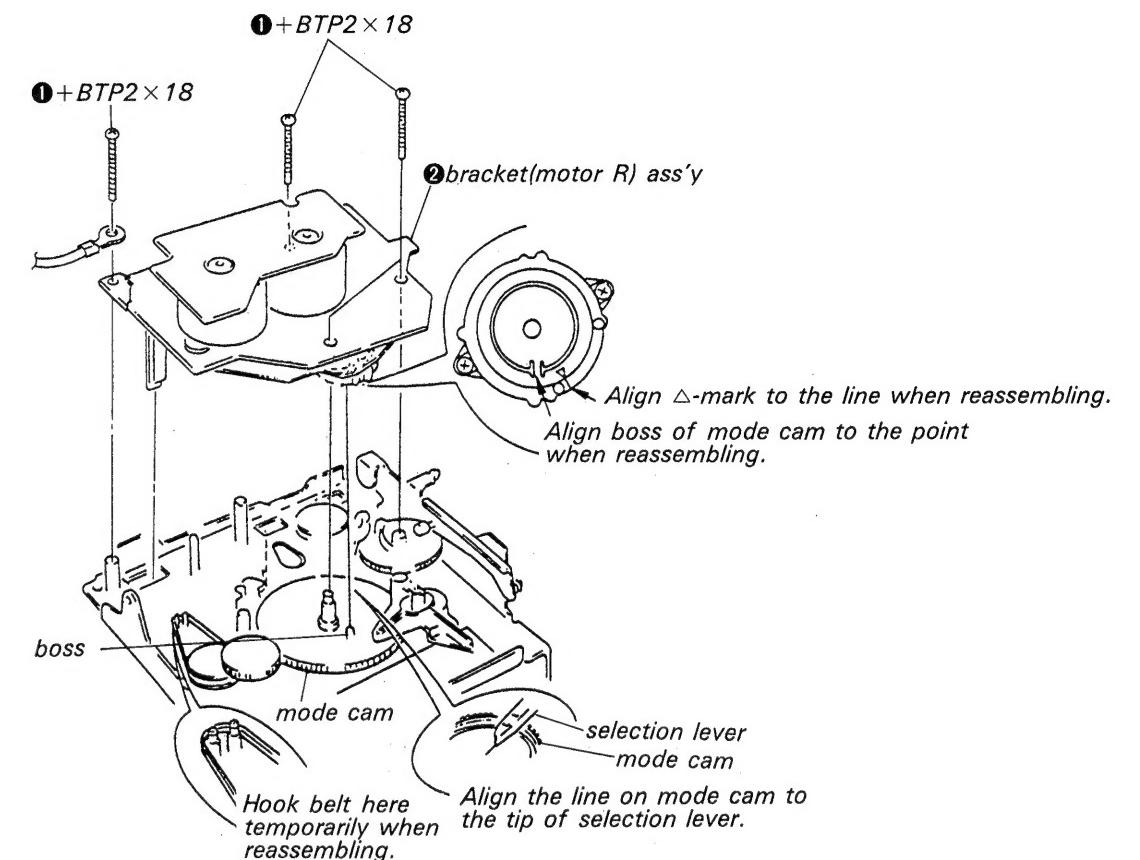
③Push lever (lifter) in the direction of arrow and remove cassette holder.



ORNAMENTAL PLATE

PINCH LEVER
(TC-K570)PINCH LEVER
(TC-K670/K677ES)CAPSTAN MOTOR/FLYWHEEL
(TC-K570)CAPSTAN MOTOR/FLYWHEEL
(TC-K670/K677ES)

REEL AND ASSIST MOTORS



SECTION 3

PIN DESCRIPTION

•IC701 M50941-483SP(MICRO COMPUTER)

The M50941-483SP function are described below.

Pin No.	Pin Name	I/O	Description
1	V _{REF}	I	Internal A/D port reference voltage input.
2	KEY 7	I	Key input port. OV = OPEN/CLOSE, 1V = STOP, 2V = REW, 3V = FF, 4V = REC.
3	KEY 6	I	key input port. OV = PLAY, 1V = PAUSE, 2V = REC MUTE.
4	KEY 5	I	Key input port. OV = RESET, 1V = MEMORY, 2V = DISPLAY MODE, 3V = MONITOR.
5	METER-L	I	Signal input for level meter-L.
6	METER-R	I	Signal input for level meter-R.
7	TIMER	I	Timer REC/PLAY switch input. OV = TIMER REC, 1V = TIMER PLAY, 2V = OFF.
8	T. PULSE	I	Take-up reel base sensor input.
9	S. PULSE	I	Supply reel base sensor input.
10	AMS. SIG	I	AMS signal input. No song detected = Low. Song detected = High.
11	BIAS	O	Bias oscillation on and off control.
12	MO3V	O	Motor speed control. STOP/PLAY = Low, FF/REW = High.
13	MO4.5V	O	Motor speed control. STOP/PLAY = High, FF/REW = Low.
14	MO-FWD	O	Reel motor rotates.
15	MO-REV	O	Reel motor rotates in reverse.
16	MO-DOWN	O	Head base DOWN output of the mechanical block.
17	MO-UP	O	Head base UP output of the mechanical block.
18	HALF-SW	I	HALF switch input of the mechanical block.
19	REC-SW	I	REC switch input of the mechanical block.
20	DOOR-SW	I	DOOR switch input of the mechanical block.
21	CLOSE-SW	I	CLOSE switch input of the mechanical block.
22	OPEN-SW	I	OPEN switch input of the mechanical block.
23	POWER-OUT	O	"Low" for power off procedure after POWER switch is turned off.
24	POWER-IN	I	Power(AC) off detection.
25	SIRCS	I	Remote control signal input.
26	V _{ss}	-	GND
27	RESET	I	System reset input.
28	XI	I	Clock input(4.19MHz).
29	XO	O	Clock output.
30	XCI	-	Not used.
31	XCO	-	Not used.
32	V _{ss}	-	GND
33	-	-	Not used.
34	PAT3	I	
		I	Rotary encoder input to detect the position of the head base of the mechanical block.
37	PATO	I	
38	-25V	-	Power supply for driving the fluorescent indicator tube.
39	FL-p	O	
		I	Segment data output for the fluorescent indicator tube FL751.
54	FL-a	O	
55	FL-G5	O	
		I	Common data output for the fluorescent indicator tube FL751.
59	FL-G1	O	
60	MONITOR	O	Source monitor control. Low = TAPE, High = SOURCE.
61	REC-MUTE	O	REC MUTE control. Low = MUTE.
62	LINE-MUTE	O	LINE MUTE control. Low = MUTE.
63	AV _{cc}	-	Analog power supply(+5V).
64	V _{cc}	-	Power supply(+5V).

SECTION 4 ADJUSTMENTS

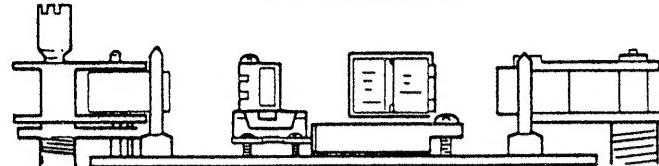
1. MECHANICAL ADJUSTMENTS

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch roller
erase head	rubber belts
capstan	idler
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.

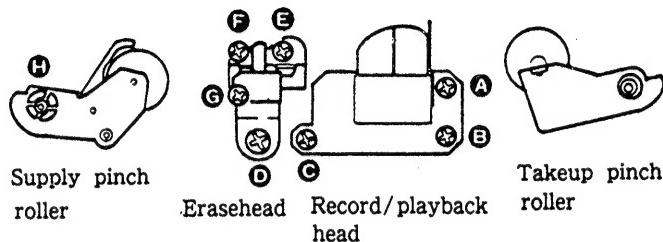
Adjustment Position : As seen from the cassette, side (top) and MD as seen head on (bottom).



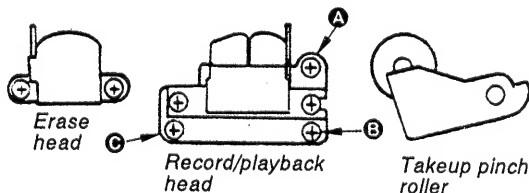
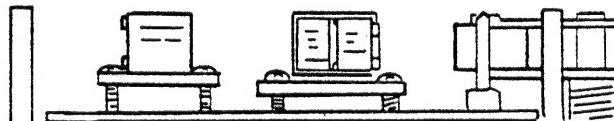
Tape Path Adjustment

Note : When using the adjustment methods for other than replacement reasons, please do not tamper unnecessarily with the adjustment screws or the erasehead because either the supply pinch roller guide or the record/playback head will be made the standard tape paths. Moreover, when it is necessary to adjust and replace two or more of any of the heads and/or pinch rollers, replace them one by one, completely taking out the first tape path, and then replacing the second one.

(TC-K670/K677ES)



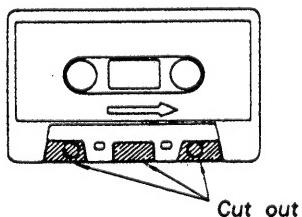
TC-K570



Preparation :

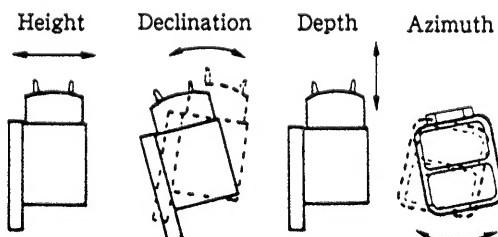
1. Mirror cassette CQ009C 8-909-708-01
(or CQ012C 8-909-708-02)

If one does not have this, cut out the sections of a 120-minute cassette shell as indicated below and use that cassette.



2. Phillips screwdriver (medium-size) :
For the head adjustment screws
- Blade-type screwdriver (large-size) :
For the supply pinch roller adjustment screws
3. Pen light
4. WS-48B (3 kHz, 0 dB)
5. P-4-A100 (10 kHz, -10 dB)

Definition of Terms : The figures are of a record/playback head.



Adjustment Method :

Supply Pinch Roller : TC-K670/K677ES

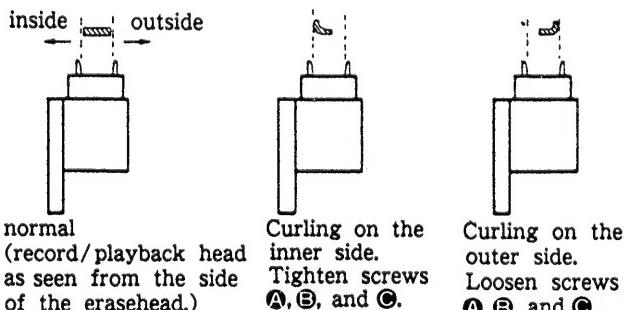
Note : Only perform this adjustment when the supply pinch roller is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. Check to see whether the tape is curling at the record/playback head guide or the pinch roller guide.
If it is curling, remove the curl by adjusting the **H** tape curl adjustment screw. Then, check that the tape is running past the middle of the erasehead.

Record/playback Head

Note : Only perform this adjustment when the record / playback head is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. **(Height Adjustment)** Check to see if the tape is curling at the tape guide of the head. If it is curling, tighten screws **A**, **B**, and **C**, respectively by the same angle, moving the head so that it remains at the same angle throughout the procedure. If it curls on the bottom side of the mirror cassette (actually the inner side), tighten all the screws equally; but loosen them if the tape begins to curl on the top side (outer side).



3. **(Declination Adjustment)** While in the record / playback position, set the back tension to 0 (wind the supply reel with something thin like a pencil in a counterclockwise direction) and make sure there is no curling or shifting (shifting up / shifting down) at the guide of the record / playback head.

Because shifting can only occur due to a difference in the width of the tape and that of the tape guides (curling will otherwise occur), it is necessary to pay close attention since it can be easily overlooked.

When there is a shift, tighten screws **B** and **C** equally and change the declination of the head. If the tape is shifting up, tighten the screws, and if it is shifting down, loosen them.

4. Repeat the adjustments in steps 2 and 3 and fine adjust the height and the declination.

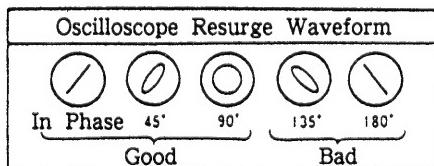
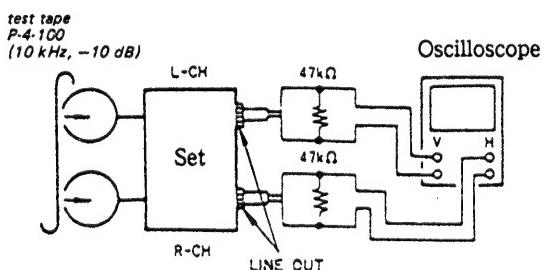
5. (Preliminary Azimuth Adjustment)

After demagnetizing and cleaning the adjustment head, play back WS-48B (3 kHz, 0 dB).

Turn screw **C** so that the reading on the level meter of the unit or that of the level meter connected to LINE OUT is maximized.

If the screw is turned at least half a revolution, repeat the adjustments from step 1.

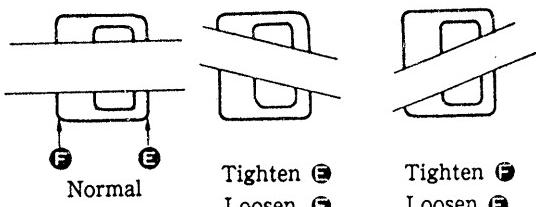
6. **(Tape Path Check)** Connect the oscilloscope to LINE OUT and play back P-4-A100 (10 kHz, -10 dB) to display a resurge waveform. After 20 seconds of record/playback (after the tension within the loop has been increased sufficiently), make sure the variation in the resurge is within ± 90 degrees (within ± 45 degrees is desired). If the variation is greater than this, it is because the declination and/or the height adjustment is not perfect. Repeat the adjustments from step 1.



Erasehead : TC-K670/K677BS

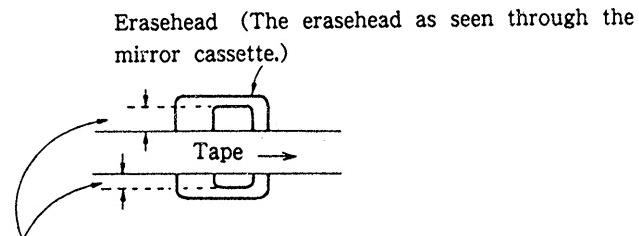
Note: Only perform this adjustment when the erasehead is to be replaced.

1. Insert the mirror cassette and put the unit in record/playback mode.
2. (**Azimuth Adjustment**) Adjust the azimuth of the erasehead by adjusting screws **E** and **F** so that the tape runs as evenly as possible.



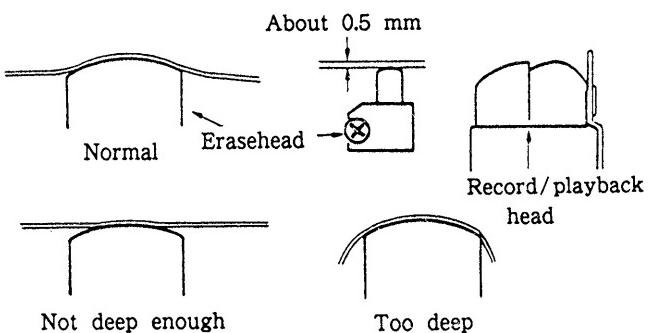
(The erasehead as seen when erasing the mirror cassette.)

3. (**Height adjustment**) Turn screws **D**, **E**, and **F** all by the same angle so that the portions of the erasehead visible at top and bottom are nearly of equal width. If the width at the top is greater, tighten the screws; if the width at the bottom is greater, loosen the screws.



Make these the same width.

4. (**Declination Adjustment**) Leaving it in the playback position, put the back tension to 0 and make certain the erasehead part and supply pinch roller guide part do not shift. If there is a shift, turn the screw **D** and change the declination. Looking at it using the mirror cassette, if the tape shifts up, tighten the screw, and if it shifts down, loosen the screw.
5. Repeat the adjustments beginning with step 2 and fine adjust the height and declination. And make sure the tape does not curl up on the pinch roller guide or the guide part of the record/playback head.
6. (**Depth Adjustment**) In order to make the entire head play the tape smoothly, and to make sure the depth of the erasehead is neither too shallow nor too deep, loosen screw **G** a bit.



Check

1. Check to make sure that there are no curls or shifts throughout the whole tape path and that the tape runs smoothly.
2. Reapply the locking compound to the adjusted screws. (The locking compound should only be applied to screw **G** after the azimuth has been adjusted.)

TORQUE MEASUREMENT

Torque	Torque meter	Meter reading
FWD	C Q-102C	28-60 g · cm(0.39-0.83 oz · inch)
FWD Back tension	C Q-102C	TC-K570:1-5 g · cm(0.014-0.069 oz · inch) TC-K670/K677ES:7-11 g · cm(0.097-0.15 oz · inch)
FF, REW	C Q-201B	65-90 g · cm(0.9-1.25 oz · inch)

Pinch Roller Pressing Force Measurement

Mode : playback

Hook needle of the tension gauge to the pinch roller shaft and push back pinch roller to detach it from capstan. Then, return it gradually to capstan and read the gauge when the pinch roller begins turning.

Standard Limits :

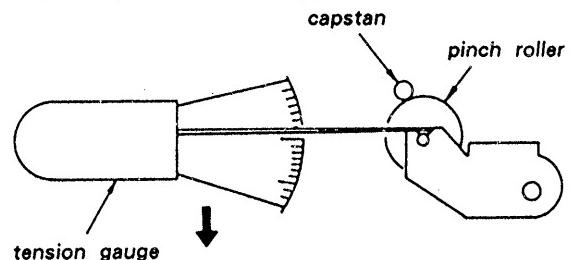
Tape-up side

TC-K570 : 210-320 g(7.4-11.3 oz)

TC-K670/K677ES : 270-350 g(9.5-12.0 oz)

Supply side

TC-K670/K677ES : 180-280 g(6.4-9.9 oz)



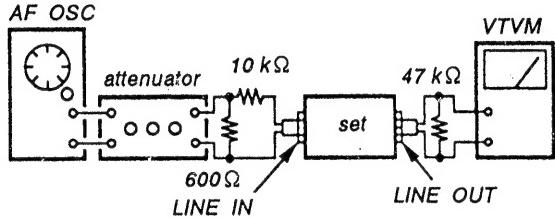
2. ELECTRICAL ADJUSTMENT

Note: The adjustment should be performed in the order given in the service manual. As a rule, adjustments about playback should be performed before those about recording.

The adjustments should be performed before for both L-CH and R-CH.

- Switches and controls should be set as follows unless otherwise specified.
 - DOLBY NR switch: OFF
 - MPX FILTER switch: OFF
 - MONITOR switch: Tape
- Standard Record:
Deliver the standard input signal level to the input jack and set the REC LEVEL control to obtain the standard output signal level.

- Record Mode -



Standard Input Level

input terminal	LINE IN
source impedance	10 kΩ
input level	0.25 V (-10 dB)

Standard Output Level

output terminal	LINE OUT
load impedance	47 kΩ
output level	0.44V (-5 dB)

Test Tape

Type	Signal	Used for
P-4-A100	10 kHz, -10 dB	Azimuth Adjustment
P-4-L300	315 Hz, 0 dB	PB Level Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

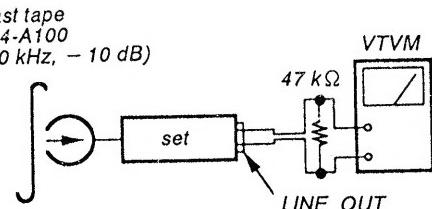
Test Mode

This set will get into test mode by shorting the pins of CNE707 (TEST) on MA I N (A) board before turning the power on.

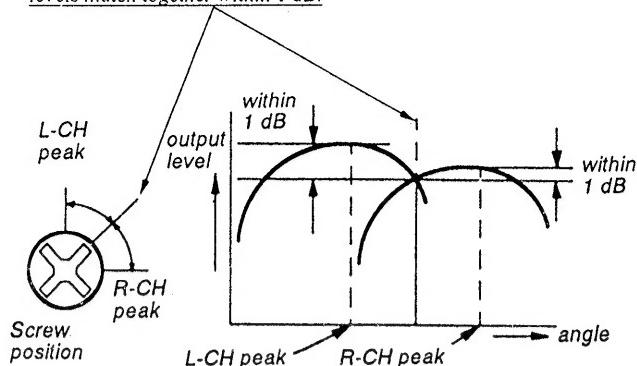
Record/Playback Head Azimuth Adjustment

Procedure:

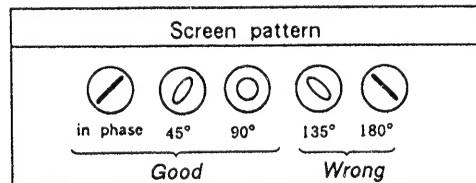
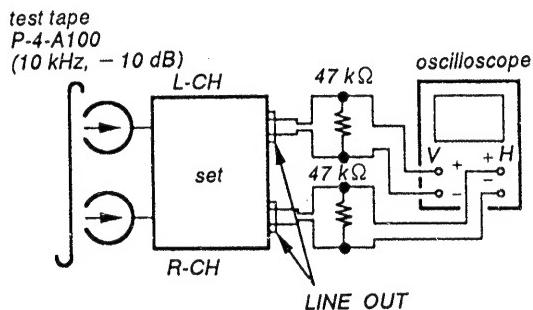
- Mode: FWD playback



- Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 1 dB.



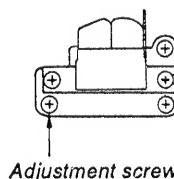
- Phase Check
Mode: playback



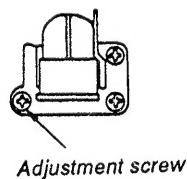
- After the adjustment, lock the screws with locking compound.

Adjustment Location: Record/Playback head

TC-K570



TC-K670/K677BS



Tape Speed Adjustment

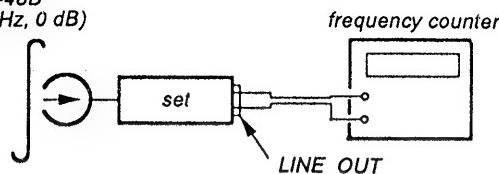
Setting:

Test pin CNE707: short

Procedure:

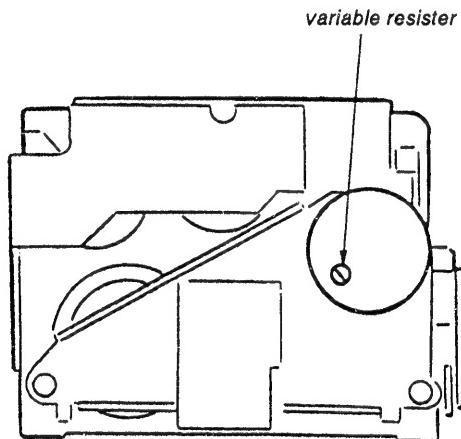
Mode: playback

test tape
WS-48B
(3 kHz, 0 dB)



- Set to FWD playback mode.
- Adjust motor rear side (variable resistor) so that the frequency counter reading becomes $3,000 \pm 15$ Hz.

Adjustment Location: motor rear side

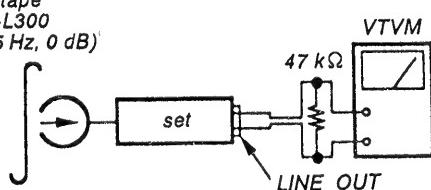


Playback Level Adjustment

Procedure:

Mode: playback

test tape
P-4-L300
(315 Hz, 0 dB)



Adjust RV121 (L-ch) and RV221 (R-ch) so that the reading on VTVM meets the adjustment limits below.

Adjustment Limits:

LINE OUT level: -5 ± 0.5 dB (0.41 – 0.46 V)

Level difference between channels: less than 0.5 dB

Check that the LINE OUT level does not change even if Playback and Stop operation is repeated several times.

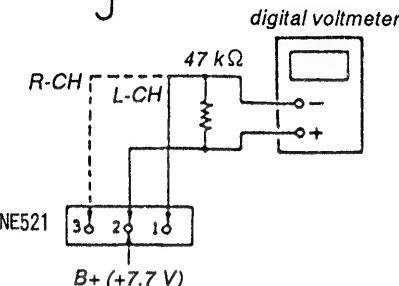
Adjustment Location: MA IN (A) board

Bias Consumption Current Adjustment

Procedure:

LINE IN
(no signal)

CS-412 blank tape



- Set RV181 and RV281 to mechanical center and turn the set recording mode.
- Connect digital voltmeter as shown by the following table.
- Adjust the following transformers for the minimum readings on the digital voltmeter.

	Measurement Point	Adjustment Part	Value
L-ch	① and ②, CNE521	T181	not more than
R-ch	③ and ④ CNE521	T281	200mV

Adjustment Location: MA IN (A) board

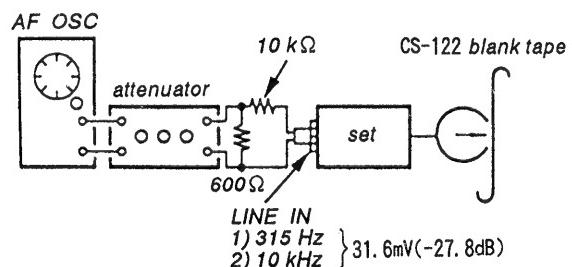
Record Bias Adjustment

Setting:

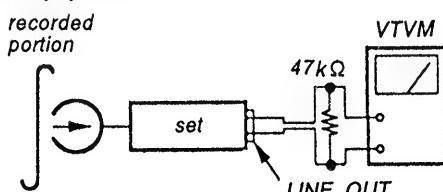
REC LEVEL control: Standard Record (see page 12).
test pin CNE707: short

Procedure:

- Mode: record



- Mode: playback



Playback the signal recorded in step 1.

Confirm that the 10 kHz playback output is 0 ± 0.5 dB relative to the 315 Hz output. If necessary, adjust RV181 (L-ch) and RV281 (R-ch) for repeat the steps given above.

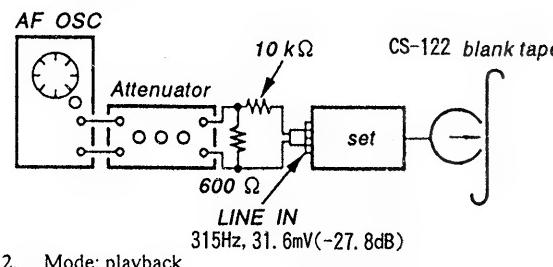
Adjustment Location: Audio system control (A) board

Record Level Adjustment**Setting:**

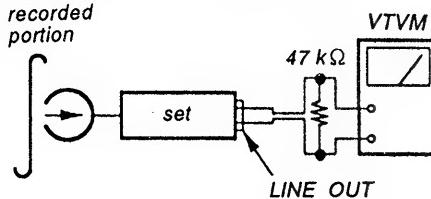
REC LEVEL control: Standard Record (See page 12).
test pin CNE707 : short

Procedure:

1. Mode: record



2. Mode: playback recorded portion



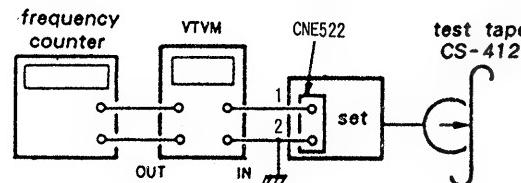
3. Playback the signal recorded in step 1.
Confirm that the signal level is within the adjustment limits below. If necessary, adjust RV141 (L-ch) and RV241 (R-ch) repeat the step 1
- 2.

Adjustment Limits: $-27.8 \pm 0.5\text{dB}$ (29 to 33.4mV)

Adjustment Location: MAIN (A) board

Erase Current Adjustment : TC-K670/K677ES

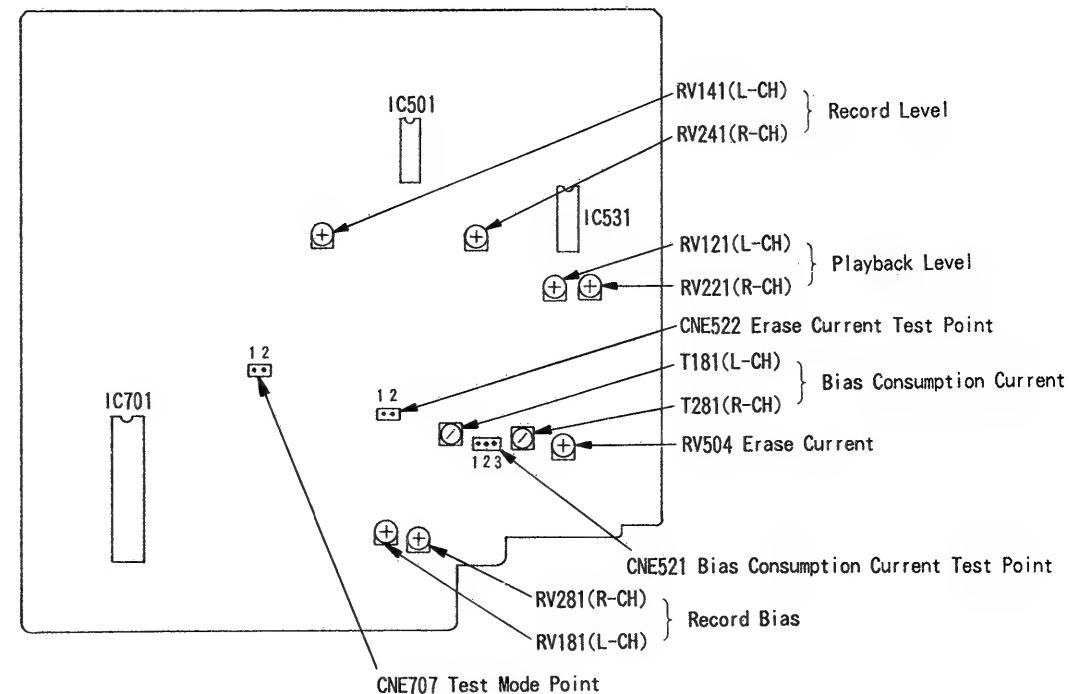
1. Mode : record



2. Adjust RV504 so that the reading on VTVM is 105mV (erase current= 105mA).
3. And then confirm that the reading on the frequency counter is 160kHz.

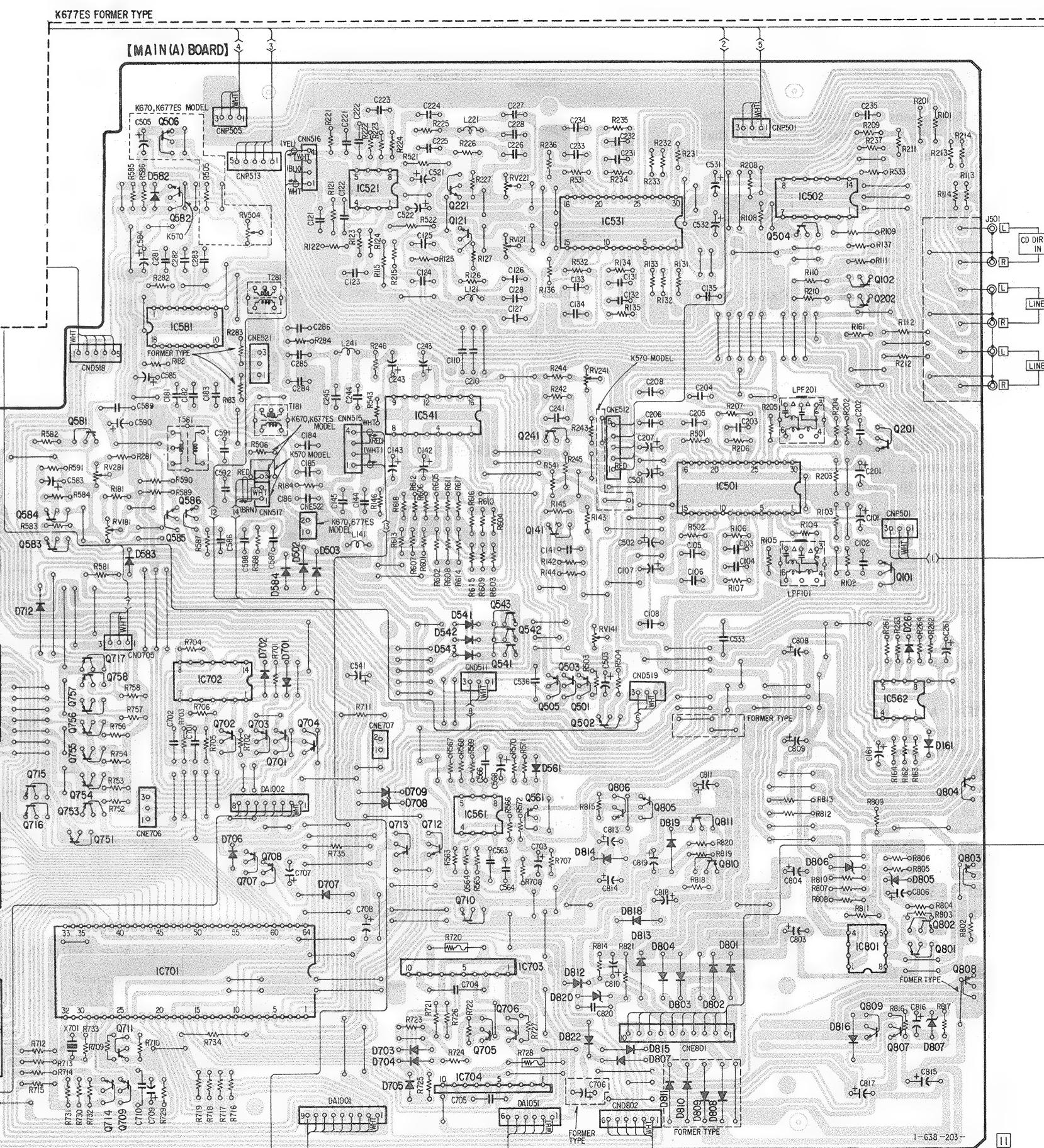
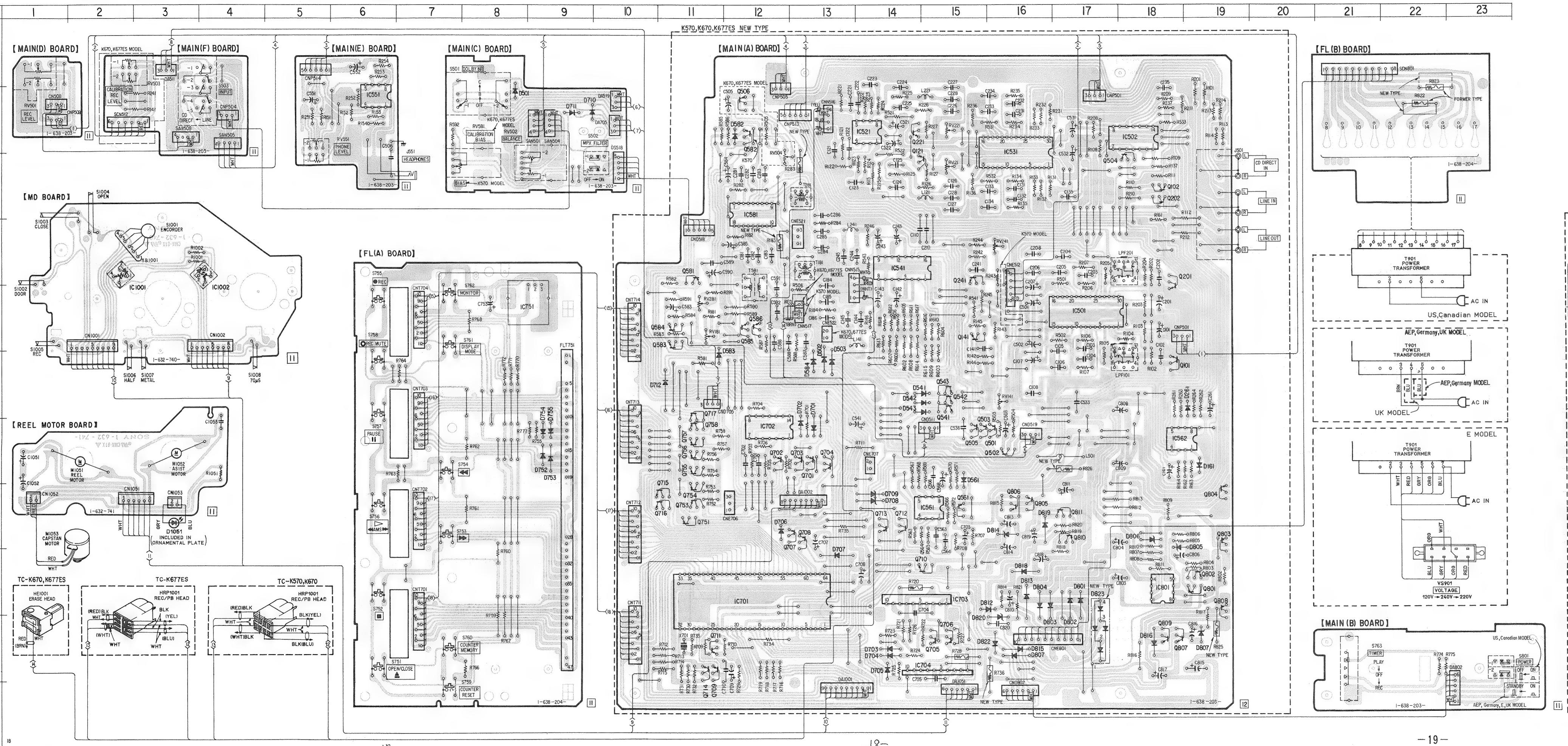
Adjustment Limits :

Erase current : 105mA to 110mA
Frequency : $160 \pm 6\text{kHz}$

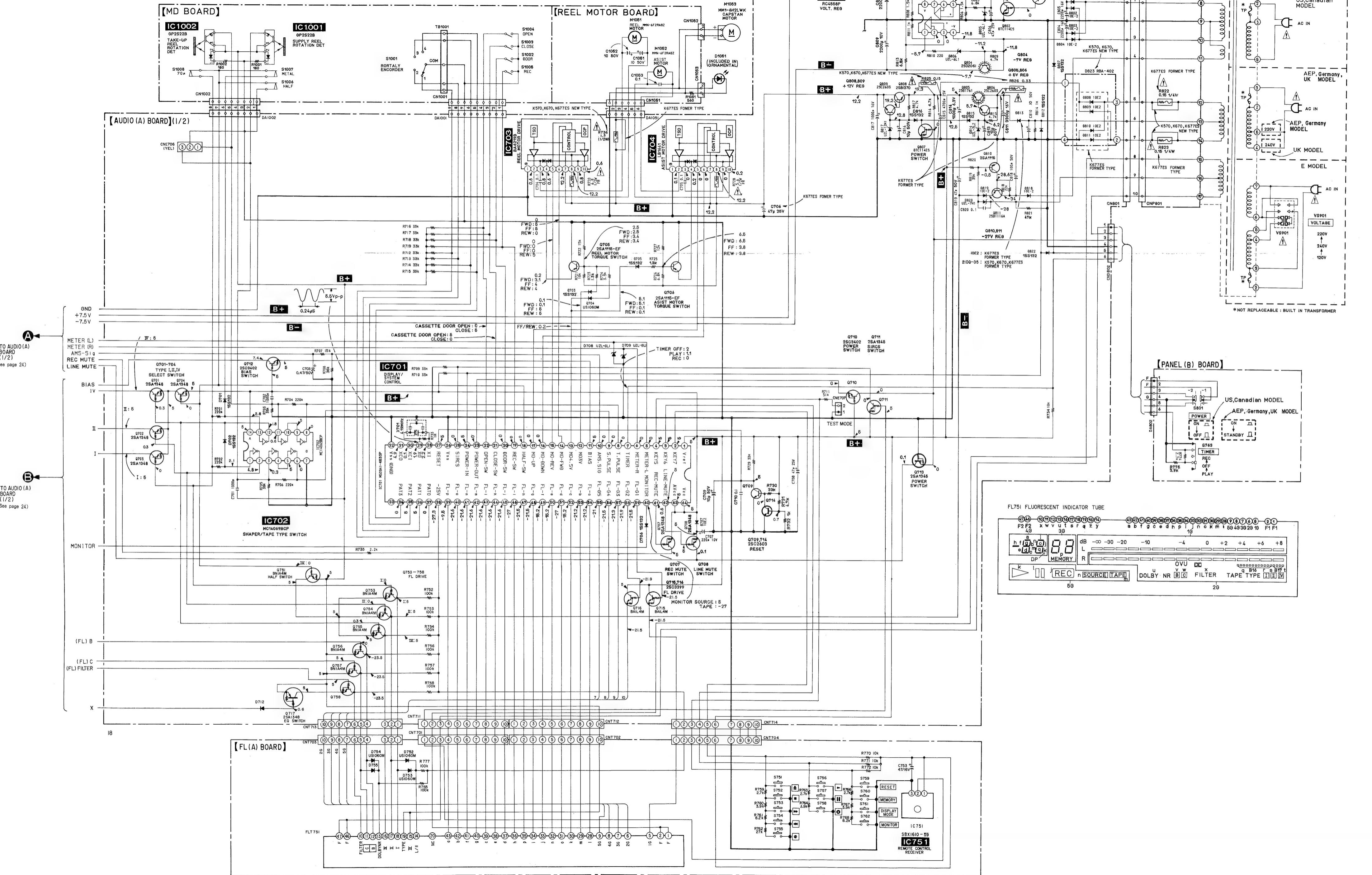
Adjustment Location**-MAIN (A) BOARD-**

SECTION 5 DIAGRAMS

1. PRINTED WIRING BOARDS •See page 21 for Semiconductor Lead Layouts and Circuit Boards Location.



5-5. SCHEMATIC DIAGRAM—System Control Section



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μF 50 pV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
- \triangle : internal component.
- \square : fusible resistor.

Note:
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

- \square : B + Line.
- \square : B - Line.
- \square : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark: STOP
- < : PLAY
- > : REC
- I : NORMAL TAPE
- II : CrO₂ TAPE
- IV : METAL TAPE

- Voltages are taken with a VOM (impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path:



: PB



: REC



: STOP



: PLAY



: REC



: NORMAL TAPE



: CrO₂ TAPE



: METAL TAPE



: STOP



: PLAY



: REC



: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

: CrO₂ TAPE

: METAL TAPE

: STOP

: PLAY

: REC

: NORMAL TAPE

SECTION 6 EXPLODED VIEWS

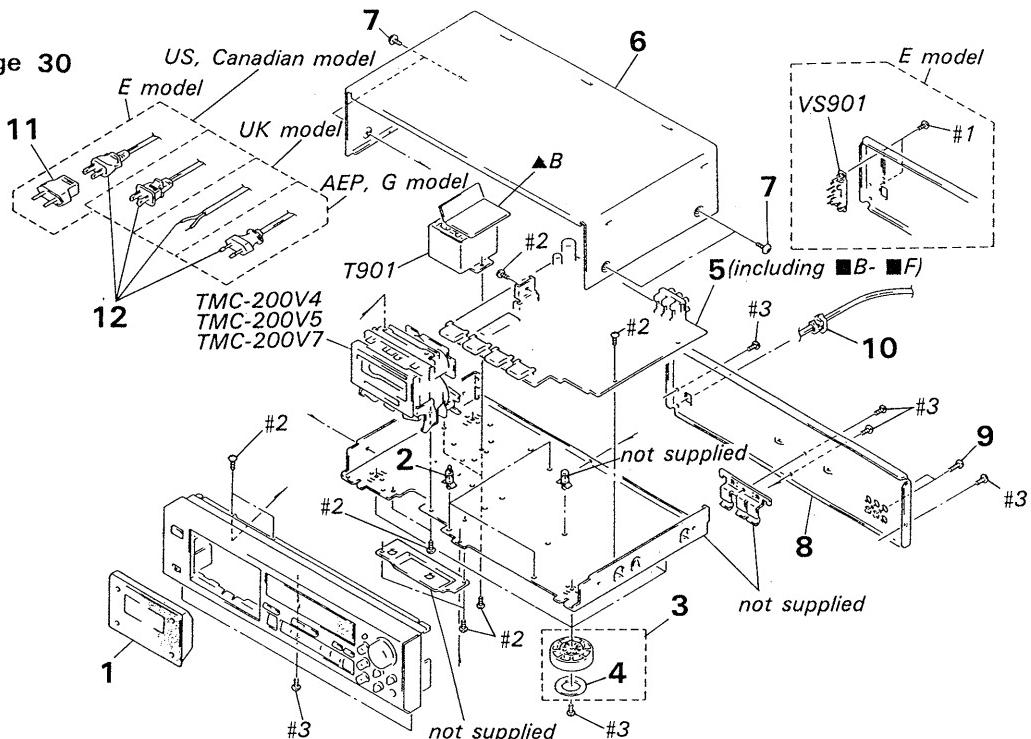
NOTE:

- -XX, -X mean standardized parts, so they may have some differences from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Color Indication of Appearance Parts
Example:
KNOB, BALANCE(WHITE)...(RED)
↑ ↑
Part's Color Cabinet's Color
- Hardware (#mark) list is given in the last of this parts list.
- K570 : TC-K570
K670 : TC-K670
K677ES : TC-K677ES
G : Germany

The components identified by mark **▲** or dotted line with mark **▲** are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque **▲** sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

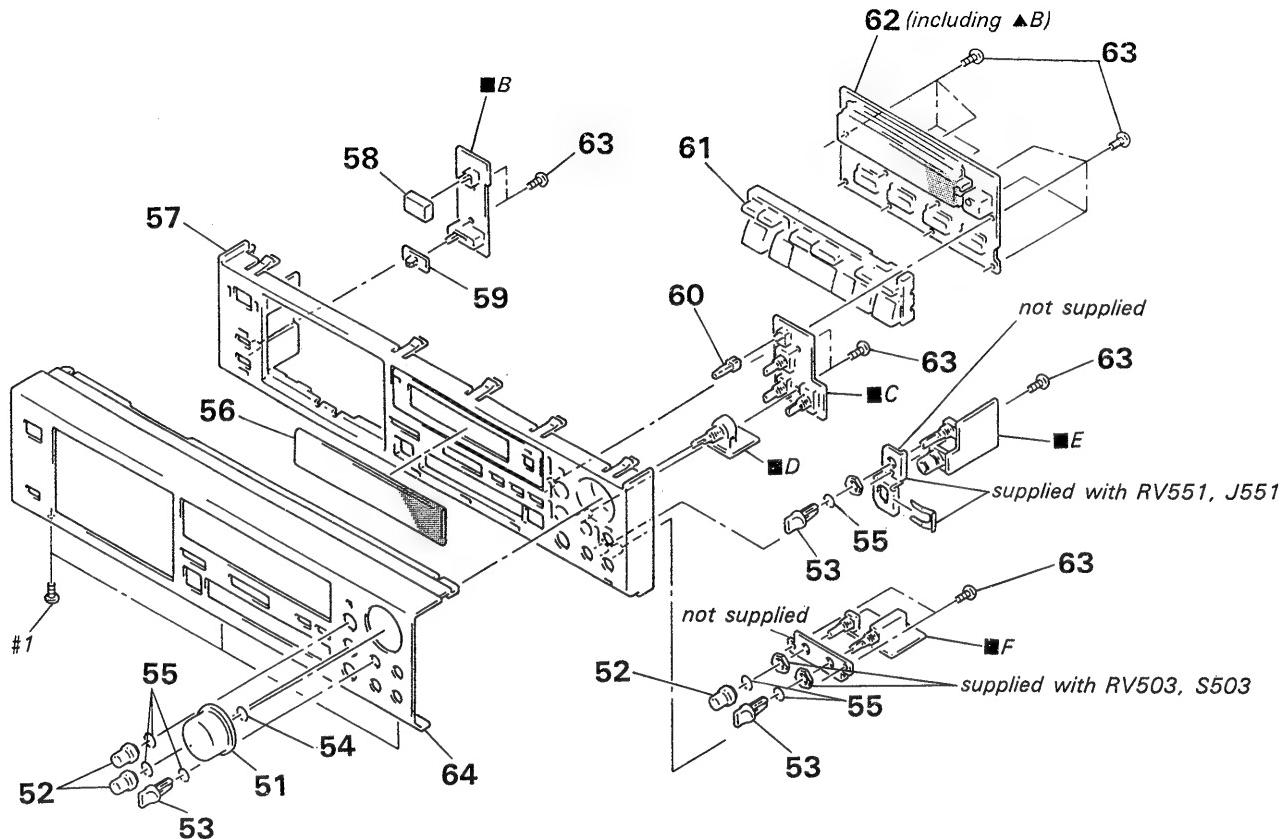
6-1. CHASSIS SECTION**▲B:FL(B)BOARD****■B-■F: See page 30**

Ref. No.	Part No.	Description	Remark
1	X-3363-010-1	LID (B) ASSY, CASSETTE (K677ES)	
1	X-3363-220-1	LID (A) ASSY, CASSETTE (K670)	
1	X-3363-221-1	LID (A) ASSY, CASSETTE (K570)	
2	* 3-346-265-11	HOLDER, PC BOARD	
3	X-3304-938-2	FOOT ASSY (K570:AEP, G, UK, E/ K670:AEP, G/K677ES)	
3	X-4885-950-1	FOOT ASSY (K570:Canadian/K670:US)	
4	4-923-836-11	CUSHION	
5	* A-2006-464-A	MAIN (A) BOARD, COMPLETE (K677ES)	
5	* A-2006-530-A	MAIN (A) BOARD, COMPLETE (INCLUDING MAIN (B)-MAIN(F) BOARD) (K570)	
5	* A-2006-531-A	MAIN (A) BOARD, COMPLETE (INCLUDING MAIN (B)-MAIN(F) BOARD) (K670)	
6	3-332-578-61	CASE	
7	3-704-366-01	SCREW (CASE) (M3X8)	
8	* 3-367-791-01	PANEL, BACK (K670:US)	
8	* 3-367-791-11	PANEL, BACK (K670:AEP, G)	
8	* 3-366-792-01	PANEL, BACK (K677ES:US, Canadian)	
8	* 3-367-792-01	PANEL, BACK (K570:AEP, G)	
8	* 3-366-792-11	PANEL, BACK (K677ES:UK)	
8	* 3-367-792-21	PANEL, BACK (K570:UK)	
8	* 3-367-792-31	PANEL, BACK (K570:Canadian)	
8	* 3-367-792-41	PANEL, BACK (K570:E)	

Ref. No.	Part No.	Description	Remark
9	7-621-849-00	SCREW (BV/RING)	
10	* 3-703-571-11	BUSHING (S) (4516), CORD (K570:Canadian E/K670:US/K677ES:US, Canadian)	
10	* 3-703-244-00	BUSHING (2104), CORD (K570:AEP, G, UK/ K670:AEP, G/K677ES:UK)	
11	▲ 1-569-007-11	ADAPTOR, CONVERSION 2P (K570:E3)	
12	▲ 1-551-188-XX	CORD, POWER (K570:E)	
12	▲ 1-551-506-XX	CORD, POWER (K570:Canadian/ K677ES:US, Canadian)	
12	▲ 1-555-465-00	CORD, POWER (K670:US)	
12	▲ 1-555-795-00	CORD, POWER, EUO PLUG (K570:AEP, G/ K670:AEP, G)	
12	▲ 1-556-035-00	CORD, POWER (K570:UK/K677ES:UK)	
T901	▲ 1-450-100-11	TRANSFORMER, POWER (K570:Canadian/ K670:US/K677ES:US, Canadian)	
T901	▲ 1-450-101-11	TRANSFORMER, POWER (K570:E)	
T901	▲ 1-450-399-11	TRANSFORMER, POWER (K570:AEP, G, UK/ K670:AEP, G/K677ES:UK)	
VS901	▲ 1-570-307-11	SWITCH, VOLTAGE CHANGE (K570:E)	

6-2. FRONT PANEL SECTION

- B:MAIN(B) BOARD
- C:MAIN(C) BOARD
- D:MAIN(D) BOARD
- E:MAIN(E) BOARD
- F:MAIN(F) BOARD

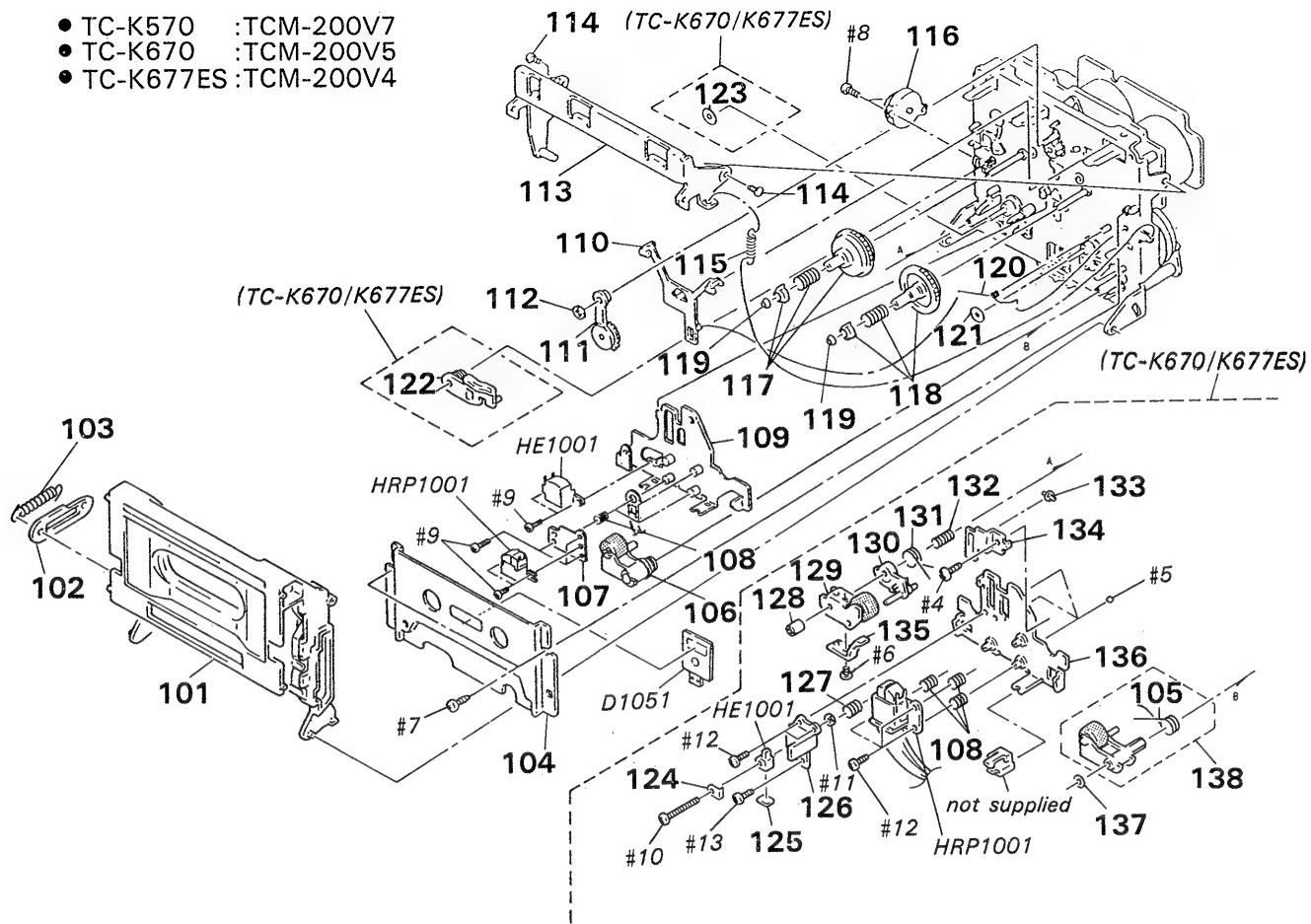


Ref. No.	Part No.	Description	Remark
51	3-367-438-12	KNOB (REC)	
52	3-367-431-01	KNOB (BAL)	
53	3-350-495-01	KNOB (VOL)	
54	3-350-426-01	SPRING	
55	3-356-957-01	SPRING	
56	3-367-433-12	WINDOW (METER) (K570/K670)	
56	3-367-430-02	WINDOW (METER) (K677ES)	
57	3-367-440-01	PANEL (BASE)	
58	4-922-921-01	BUTTON (POWER)	
59	4-931-421-11	KNOB (T & S)	
60	3-350-473-01	BUTTON	

Ref. No.	Part No.	Description	Remark
61	3-368-281-01	BUTTON (B)	
62	* 1-638-204-11	FL (A) BOARD (INCLUDING FL(B) BOARD)	
63	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
64	3-368-282-01	PANEL, FRONT (K677ES:US, Canadian)	
64	3-368-282-11	PANEL, FRONT (K677ES:UK)	
64	3-368-282-21	PANEL, FRONT (K670:US)	
64	3-368-282-31	PANEL, FRONT (K670:AEP, G)	
64	3-368-282-41	PANEL, FRONT (K570:Canadian)	
64	3-368-282-51	PANEL, FRONT (K570:AEP, G, UK, E)	

6-3. MECHANISM SECTION 1

- TC-K570 : TCM-200V7
- TC-K670 : TCM-200V5
- TC-K677ES : TCM-200V4

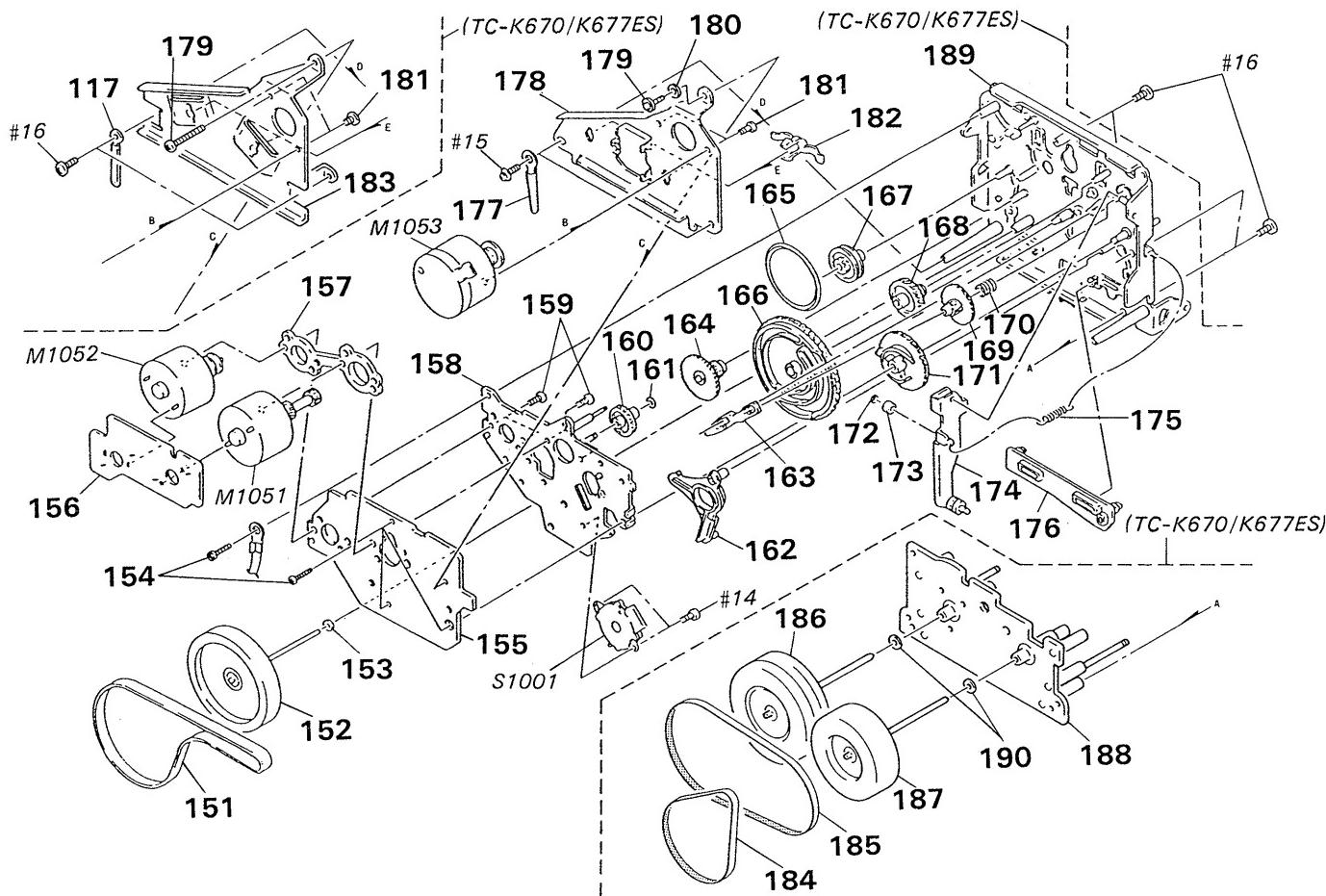


Ref. No.	Part No.	Description	Remark
101	X-3362-814-1	HOLDER (CD) ASSY, CASSETTE	
102	* 3-356-717-01	LEVER (JOINT)	
103	3-356-626-01	SPRING, TENSION	
104	X-3356-613-1	PLATE ASSY, ORNAMENTAL	
105	3-356-672-01	SPRING (PINCH LEVER T), TORSION (K670/K677ES)	
106	X-3356-649-1	LEVER (PINCH LEVER T) ASSY (K570)	
107	* 3-356-742-01	BRACKET (GUIDE R) (K570)	
108	3-356-659-01	SPRING (RPH), COMPRESSION	
109	X-3356-648-1	SLIDER (HEAD CHASSIS V2) ASSY (K570)	
110	3-356-614-01	SLIDER (BRAKE)	
111	X-3356-641-1	LEVER (FR2) ASSY	
112	3-669-465-00	WASHER (1.5), STOPPER	
113	* X-3356-608-1	LEVER (LIFTER) ASSY	
114	3-356-601-11	SCREW, STEP	
115	3-356-625-01	SPRING, TENSION	
116	3-319-224-31	DAMPER, SMALL	
117	X-3356-628-1	GEAR (S) ASSY (K570)	
117	X-3356-629-1	GEAR (S) ASSY (K670/K677ES)	
118	X-3356-627-1	GEAR (T) ASSY	
119	3-362-308-01	CAP (REEL)	
120	3-356-619-01	SPRING (B), TORSION	
121	3-332-763-01	RING, OIL RESERVOIR (K670/K677ES)	
121	3-356-713-01	WASHER (K570)	
122	X-3356-623-1	LEVER (BT) ASSY (K670/K677ES)	
123	3-356-713-01	WASHER (K670/K677ES)	
124	3-318-433-01	SPRING (K670/K677ES)	

Ref. No.	Part No.	Description	Remark
125	* 1-608-268-00	PC BOARD, ERASE HEAD (K670/K677ES)	
125	3-564-121-00	SPRING, COMPRESSION (K670/K677ES)	
126	* 3-576-977-00	BRACKET, E. HEAD (K670/K677ES)	
128	3-356-652-01	NUT (PINCH LEVER S) (K670/K677ES)	
129	X-3356-621-1	LEVER (PINCH LEVER S) ASSY (K670/K677ES)	
130	3-356-660-01	LEVER (PS) (K670/K677ES)	
131	3-356-661-01	SPRING (PINCH LEVER S), TORSION (K670/K677ES)	
132	3-356-657-01	SPRING (PS), COMPRESSION (K670/K677ES)	
133	3-367-775-01	ROLLER (HEAD CHASSIS) (K670/K677ES)	
134	3-356-656-01	SPRING (HEAD PC BOARD), LEAF (K670/K677ES)	
135	3-564-138-00	GUIDE (S), TAPE (K670/K677ES)	
136	* X-3362-861-1	SLIDER (HEAD CHASSIS V4) ASSY (K670/K677ES)	
137	3-669-596-00	WASHER (2.3), STOPPER (K670/K677ES)	
138	X-3356-620-1	LEVER (PINCH LEVER T) ASSY (K670/K677ES)	
D1051	8-719-980-85	DIODE SLF-325C	
HE1001	1-543-836-11	HEAD, MAGNETIC (ERASE) (K670/K677ES)	
HE1001	1-543-535-11	HEAD, MAGNETIC (ERASE) (K570)	
HRP1001	1-543-733-11	HEAD, MAGNETIC (REC/PB) (K570)	
HRP1001	1-543-834-11	HEAD, MAGNETIC (REC/PB) (K670)	
HRP1001	1-543-835-11	HEAD, MAGNETIC (REC/PB) (K677ES)	

6-4. MECHANISM SECTION 2

- TC-K570 : TCM-200V7
 - TC-K670 : TCM-200V5
 - TC-K677ES:TCM-200V4



Ref. No.	Part No.	Description
151	3-356-744-01	BELT (CAPSTAN V) (K570)
152	X-3356-642-1	FLYWHEEL (R FWD) ASSY (K570)
153	3-356-705-01	WASHER (CAPSTAN) (K570)
154	3-355-801-01	SCREW (BTP 2X18)
155	* 1-632-740-11	MD BOARD
156	* 1-632-741-11	REEL MOTOR BOARD
157	* 3-356-628-01	SPACER (MOTOR)
158	* X-3356-602-4	BRACKET (MOTOR R) ASSY (K570)
158	* X-3356-616-4	BRACKET (MOTOR D) ASSY (K670/K677ES)
159	3-363-804-01	SCREW (+P 2.6X6.5)
160	3-356-702-01	GEAR (COMMUNICATION B)
161	3-669-465-00	WASHER (1.5), STOPPER
162	3-356-613-01	LEVER (MODE)
163	3-356-617-01	LEVER (SELECTION)
164	3-356-606-01	GEAR (MODE)
165	3-356-603-01	BELT (MODE)
166	3-356-747-01	GEAR (MODE CAM C)
167	3-356-607-01	PULLEY (MODE)
168	3-356-703-01	GEAR (COMMUNICATION C)
169	3-356-609-01	GEAR (LOADING)
170	3-356-605-01	SPRING, COMPRESSION
171	3-356-616-01	GEAR (LOADING CAM)
172	3-558-708-11	WASHER, STOPPER
173	3-356-630-01	ROLLER (LOADING)

Ref. No.	Part No.	Description	Remark
174	* X-3356-606-1	LEVER (LOADING) ASSY	
175	3-356-624-01	SPRING, TENSION	
176	3-356-653-01	SLIDER (PAUSE)	
177	* 3-701-822-00	HOLDER, WIRE	
178	* 3-356-629-01	BRACKET (THRUST RETAINER R) (K570)	
179	3-356-707-01	SCREW (+PTPWH 2X25)	
180	* 3-356-718-01	SPACER (THRUST RETAINER R) (K570)	
181	4-885-599-00	SCREW, FITTING, REINFORCEMENT	
182	3-575-321-00	RETAINER, THRUST, CAPSTAN	
183	* 3-367-773-01	BRACKET (THRUST RETAINER V4) (K670/K677ES)	
184	3-367-774-01	BELT (CAPSTAN V4) (K670/K677ES)	
185	3-364-600-01	BELT (CAPSTAN) (K670/K677ES)	
186	X-3362-863-2	FLYWHEEL (VT) ASSY (K670/K677ES)	
187	X-3362-864-2	FLYWHEEL (VS) ASSY (K670/K677ES)	
188	* X-3362-865-1	BRACKET (CAPSTAN BASE) ASSY (K670/K677ES)	
189	* X-3356-644-1	CHASSIS COMPLETE ASSY, MECH (K570)	
189.	* X-3362-862-1	CHASSIS (V4) ASSY, MECHANICAL (K670/K677ES)	
190	3-356-705-31	WASHER (CAPSTAN) (K670/K677ES)	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-635-1	MOTOR (CAPSTAN R2) ASSY (K670/K677ES)	
M1053	X-3356-646-1	MOTOR (CAPSTAN V1) ASSY (K570)	
S1001	1-466-238-11	ENCODER, ROTARY	

SECTION 7

ELECTRICAL PARTS LIST

FL(A)
INCLUDING FL(B)

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- RESISTORS

All resistors are in ohms

METAL : Metal-film resistor

METAL OXIDE : Metal Oxide-film resistor

F : nonflammable

- SEMICONDUCTORS

In each case, u: μ , for example:
uA... : μ A..., uPA... : μ PA...,
uPB... : μ PB..., uPC... : μ PC...,
uPD... : μ PD...

- CAPACITORS

uF : μ F

- COILS

uH : μ H

- K570 : TC-K570

K670 : TC-K670

K677ES : TC-K677ES

G : Germany

When indicating parts by reference number, please include the board name.

The components identified by mark or dotted line with mark are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
	* 1-638-204-11	FL (A) BOARD (INCLUDING FL (B) BOARD)	*****			R763	1-249-422-11	CARBON	2.7K	5%	1/4W	
		*****				R764	1-249-424-11	CARBON	3.9K	5%	1/4W	
	* 4-932-502-01	HOLDER, FL TUBE				R766	1-249-422-11	CARBON	2.7K	5%	1/4W	
	9-911-844-XX	CUSHION				R767	1-249-424-11	CARBON	3.9K	5%	1/4W	
						R768	1-249-428-11	CARBON	8.2K	5%	1/4W	
		< CAPACITOR >				R770	1-249-429-11	CARBON	10K	5%	1/4W	
C753	1-124-589-11	ELECT	47uF	20%	16V	R771	1-249-429-11	CARBON	10K	5%	1/4W	
		< CONNECTOR >				R772	1-249-429-11	CARBON	10K	5%	1/4W	
	CNT701	* 1-580-782-11	SOCKET, CONNECTOR				R777	1-249-441-11	CARBON	100K	5%	1/4W
	CNT702	* 1-580-782-11	SOCKET, CONNECTOR				R770	△ 1-219-135-11	FUSIBLE	0.15	10%	1/4W
	CNT703	* 1-580-782-11	SOCKET, CONNECTOR				(K677ES FORMER TYPE)					
	CNT704	* 1-580-782-11	SOCKET, CONNECTOR				R823	△ 1-219-135-11	FUSIBLE	0.15	10%	1/4W
			(K677ES FORMER TYPE)									
		< DIODE >										
D752	8-719-912-20	DIODE 1SS120				S751	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)				
D753	8-719-912-20	DIODE 1SS120				S752	1-554-303-21	SWITCH, TACTILE (STOP)				
D754	8-719-912-20	DIODE 1SS120				S753	1-554-303-21	SWITCH, TACTILE (FF)				
D755	8-719-912-20	DIODE 1SS120				S754	1-554-303-21	SWITCH, TACTILE (REW)				
						S755	1-554-303-21	SWITCH, TACTILE (REC)				
		< FLUORESCENT INDICATOR >				S756	1-554-303-21	SWITCH, TACTILE (PLAY/AMS)				
FLT751	1-519-657-11	INDICATOR TUBE, FLUORESCENT				S757	1-554-303-21	SWITCH, TACTILE (PAUSE)				
		< IC >				S758	1-554-303-21	SWITCH, TACTILE (REC MUTE)				
IC751	8-741-100-48	IC SBX1610-59				S759	1-554-303-21	SWITCH, TACTILE (COUNTER RESET)				
						S760	1-554-303-21	SWITCH, TACTILE (COUNTER MEMORY)				
		< RESISTOR >				S761	1-554-303-21	SWITCH, TACTILE (DISPLAY MODE)				
R755	1-249-441-11	CARBON	100K	5%	1/4W	S762	1-554-303-21	SWITCH, TACTILE (MONITOR)				
R759	1-249-422-11	CARBON	2.7K	5%	1/4W							
R760	1-249-424-11	CARBON	3.9K	5%	1/4W							
R761	1-249-428-11	CARBON	8.2K	5%	1/4W							
R762	1-249-434-11	CARBON	27K	5%	1/4W							

FL(A)
INCLUDING FL(B)

MAIN(A)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	* 1-632-740-11	MD BOARD		C106	1-136-171-00	FILM	0.33uF 5% 50V
	*****			C107	1-126-059-11	ELECT	10uF 20% 50V
	3-356-631-01	HOLDER (SENSOR)		C108	1-124-657-00	ELECT	10uF 20% 50V
		< CONNECTOR >		C110	1-161-494-00	CERAMIC	0.022uF 25V
CN1001	1-506-615-11	PIN, CONNECTOR 9P		C121	1-110-335-11	MYLAR	100PF 5% 50V (K677ES)
CN1002	1-564-501-11	PIN, CONNECTOR 8P		C121	1-110-340-11	MYLAR	270PF 5% 50V (K570/K670)
		< IC >		C122	1-162-282-31	CERAMIC	100PF 10% 50V
IC1001	8-749-920-97	IC PHOTO REFLECTOR GP2S22B		C123	1-130-487-00	MYLAR	0.022uF 5% 50V
IC1002	8-749-920-97	IC PHOTO REFLECTOR GP2S22B		C124	1-124-657-00	ELECT	10uF 20% 50V
		< RESISTOR >		C125	1-130-488-00	MYLAR	0.027uF 5% 50V
R1001	1-249-408-11	CARBON	180 5% 1/4W	C126	1-130-474-00	MYLAR	0.0018uF 5% 50V
R1002	1-249-408-11	CARBON	180 5% 1/4W	C127	1-102-518-11	CERAMIC	33PF 5% 50V
		< SWITCH >		C128	1-130-474-00	MYLAR	0.0018uF 5% 50V
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)		C131	1-130-475-00	MYLAR	0.0022uF 5% 50V
S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)		C132	1-130-475-00	MYLAR	0.0022uF 5% 50V
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)		C133	1-136-174-00	FILM	0.56uF 5% 50V
S1005	1-572-125-11	SWITCH, LEAF (REC)		C134	1-136-171-00	FILM	0.33uF 5% 50V
S1006	1-572-202-11	SWITCH, LEAF (HALF)		C135	1-124-657-00	ELECT	10uF 20% 50V
S1007	1-572-125-11	SWITCH, LEAF (METAL)		C141	1-136-175-00	FILM	0.68uF 5% 50V
S1008	1-572-125-11	SWITCH, LEAF (70uS)		C142	1-126-059-11	ELECT	10uF 20% 50V
		< CONNECTOR >		C143	1-126-059-11	ELECT	10uF 20% 50V
TB1001	*	1-569-066-11 PIN, CONNECTOR 5P		C144	1-110-338-51	MYLAR	180PF 5% 50V
	*****			C145	1-136-935-11	FILM	22PF 5% 630V
				C161	1-123-382-00	ELECT	3.3uF 20% 100V
				C181	1-136-153-00	FILM	0.01uF 5% 50V
				C182	1-136-157-00	FILM	0.022uF 5% 50V
				C183	1-136-165-00	FILM	0.1uF 5% 50V
				C184	1-136-803-11	FILM	560PF 5% 630V
				C185	1-136-433-11	FILM	100PF 5% 630V
				C186	1-130-468-00	MYLAR	560PF 5% 50V
				C201	1-126-059-11	ELECT	10uF 20% 50V
				C202	1-106-351-00	MYLAR	2200PF 5% 200V
				C203	1-130-475-00	MYLAR	0.0022uF 5% 50V
				C204	1-130-475-00	MYLAR	0.0022uF 5% 50V
				C205	1-136-174-00	FILM	0.56uF 5% 50V
				C206	1-136-171-00	FILM	0.33uF 5% 50V
				C207	1-126-059-11	ELECT	10uF 20% 50V
				C208	1-124-657-00	ELECT	10uF 20% 50V
				C210	1-161-494-00	CERAMIC	0.022uF 25V
				C221	1-110-335-11	MYLAR	100PF 5% 50V (K677ES)
				C221	1-110-340-11	MYLAR	270PF 5% 50V (K570/K670)
				C222	1-162-282-31	CERAMIC	100PF 10% 50V
				C223	1-130-487-00	MYLAR	0.022uF 5% 50V
				C224	1-124-657-00	ELECT	10uF 20% 50V
				C225	1-130-488-00	MYLAR	0.027uF 5% 50V
				C226	1-130-474-00	MYLAR	0.0018uF 5% 50V

MAIN(A)

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C227	1-102-518-11	CERAMIC	33PF	5%	50V	C590	1-124-907-11	ELECT	10uF	20%	50V (K670/K677ES)
C228	1-130-474-00	MYLAR	0.0018uF	5%	50V	C590	1-126-233-11	ELECT	22uF	20%	50V (K570)
C231	1-130-475-00	MYLAR	0.0022uF	5%	50V	C591	1-107-045-00	MICA	3.9PF		500V
C232	1-130-475-00	MYLAR	0.0022uF	5%	50V	C592	1-136-558-11	FILM	0.0039uF	5%	630V (K570)
C233	1-136-174-00	FILM	0.56uF	5%	50V	C592	1-136-559-11	FILM	0.0047uF	5%	630V (K670/K677ES)
C234	1-136-171-00	FILM	0.33uF	5%	50V	C701	1-162-294-31	CERAMIC	0.001uF	10%	50V
C235	1-124-657-00	ELECT	10uF	20%	50V	C702	1-162-294-31	CERAMIC	0.001uF	10%	50V
C241	1-136-175-00	FILM	0.68uF	5%	50V	C703	1-124-902-00	ELECT	0.47uF	20%	50V
C242	1-126-059-11	ELECT	10uF	20%	50V	C704	1-164-159-11	CERAMIC	0.1uF		50V
C243	1-126-059-11	ELECT	10uF	20%	50V	C705	1-164-159-11	CERAMIC	0.1uF		50V
C244	1-110-338-51	MYLAR	180PF	5%	50V	C706	1-124-477-11	ELECT	47uF	20%	25V (K677ES FORMER TYPE)
C245	1-136-935-11	FILM	22PF	5%	630V	C707	1-126-176-11	ELECT	220uF	20%	10V
C261	1-123-382-00	ELECT	3.3uF	20%	100V	C708	1-124-477-11	ELECT	47uF	20%	25V
C281	1-136-153-00	FILM	0.01uF	5%	50V	C709	1-124-907-11	ELECT	10uF	20%	50V
C282	1-136-157-00	FILM	0.022uF	5%	50V	C710	1-164-159-11	CERAMIC	0.1uF		50V
C283	1-136-165-00	FILM	0.1uF	5%	50V	C803	1-124-556-11	ELECT	2200uF	20%	16V
C284	1-136-803-11	FILM	560PF	5%	630V	C804	1-124-556-11	ELECT	2200uF	20%	16V
C285	1-136-433-11	FILM	100PF	5%	630V	C806	1-124-477-11	ELECT	47uF	20%	25V
C286	1-130-468-00	MYLAR	560PF	5%	50V	C808	1-124-999-11	ELECT	2200uF	20%	10V
C501	1-126-022-11	ELECT	47uF	20%	25V	C809	1-124-999-11	ELECT	2200uF	20%	10V
C502	1-126-022-11	ELECT	47uF	20%	25V	C810	1-124-907-11	ELECT	10uF	20%	50V
C503	1-124-903-11	ELECT	1uF	20%	50V	C811	1-126-936-11	ELECT	3300uF	20%	16V
C505	1-124-902-00	ELECT	0.47uF	20%	50V (K670/K677ES)	C813	1-124-907-11	ELECT	10uF	20%	50V
C506	1-161-494-00	CERAMIC	0.022uF		25V	C814	1-126-916-11	ELECT	1000uF	20%	6.3V
C521	1-124-994-11	ELECT	100uF	20%	10V	C815	1-124-564-11	ELECT	4700uF	20%	25V
C522	1-124-994-11	ELECT	100uF	20%	10V	C816	1-124-907-11	ELECT	10uF	20%	50V
C531	1-126-022-11	ELECT	47uF	20%	25V	C817	1-124-360-00	ELECT	1000uF	20%	16V
C532	1-126-022-11	ELECT	47uF	20%	25V	C818	1-124-122-11	ELECT	100uF	20%	50V
C533	1-164-159-11	CERAMIC	0.1uF		50V	C819	1-124-910-11	ELECT	47uF	20%	50V
C536	1-164-159-11	CERAMIC	0.1uF		50V	C820	1-164-159-11	CERAMIC	0.1uF		50V
C541	1-124-903-11	ELECT	1uF	20%	50V	< CONNECTOR >					
C551	1-124-907-11	ELECT	10uF	20%	50V	CND511	* 1-564-337-00	PIN, CONNECTOR 3P			
C552	1-124-907-11	ELECT	10uF	20%	50V	CND518	* 1-564-339-00	PIN, CONNECTOR 5P			
C563	1-162-217-31	CERAMIC	56PF	5%	50V	CND519	* 1-564-337-61	PIN, CONNECTOR 3P			
C564	1-136-157-00	FILM	0.022uF	5%	50V	CND705	* 1-564-337-71	PIN, CONNECTOR 3P			
C566	1-162-217-31	CERAMIC	56PF	5%	50V	CND802	* 1-564-340-00	PIN, CONNECTOR 6P			
C568	1-124-925-11	ELECT	2.2uF	20%	100V	CNE512	* 1-564-508-11	PLUG, CONNECTOR 5P (K670/K677ES)			
C583	1-124-902-00	ELECT	0.47uF	20%	50V	CNE521	* 1-564-506-11	PLUG, CONNECTOR 3P			
C584	1-124-477-11	ELECT	47uF	20%	25V	CNE522	* 1-564-505-11	PLUG, CONNECTOR 2P (K670/K677ES)			
C585	1-124-477-11	ELECT	47uF	20%	25V	CNE706	* 1-564-506-11	PLUG, CONNECTOR 3P			
C586	1-136-253-11	FILM	0.0018uF	5%	100V (K570)	CNE707	* 1-564-505-11	PLUG, CONNECTOR 2P			
C586	1-136-593-11	FILM	0.0033uF	5%	100V (K670/K677ES)	CNE801	* 1-564-513-11	PLUG, CONNECTOR 10P			
C587	1-136-253-11	FILM	0.0018uF	5%	100V (K570)	CNN515	* 1-560-062-00	PIN, CONNECTOR 4P			
C587	1-136-593-11	FILM	0.0033uF	5%	100V (K670/K677ES)	CNN516	* 1-560-062-00	PIN, CONNECTOR 4P			
C588	1-130-955-00	FILM	0.01uF	5%	100V (K677ES)						
C588	1-136-233-11	FILM	0.0047uF	5%	100V (K570)						
C589	1-161-494-00	CERAMIC	0.022uF		25V						

MAIN(A)

Ref. No.	Part No.	Description	Remark
CNN517 *	1-560-060-00	PIN, CONNECTOR 2P (K570)	
CNN517 *	1-560-061-00	PIN, CONNECTOR 3P (K670/K677ES)	
CNP501 *	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP504 *	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP505 *	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP508 *	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP509 *	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP510 *	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CNP513 *	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
CNP514 *	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
CNT711 *	1-580-784-11	PLUG, CONNECTOR	
CNT712 *	1-580-784-11	PLUG, CONNECTOR	
CNT713 *	1-580-784-11	PLUG, CONNECTOR	
CNT714 *	1-580-784-11	PLUG, CONNECTOR	

< DIODE >

D161	8-719-912-20	DIODE 1SS120
D261	8-719-912-20	DIODE 1SS120
D501	8-719-912-20	DIODE 1SS120
D502	8-719-912-20	DIODE 1SS120
D503	8-719-912-20	DIODE 1SS120
D541	8-719-912-20	DIODE 1SS120
D542	8-719-912-20	DIODE 1SS120
D543	8-719-912-20	DIODE 1SS120
D561	8-719-912-20	DIODE 1SS120
D582	8-719-912-20	DIODE 1SS120
D583	8-719-912-20	DIODE 1SS120
D584	8-719-912-20	DIODE 1SS120
D701	8-719-912-20	DIODE 1SS120
D702	8-719-912-20	DIODE 1SS120
D703	8-719-912-20	DIODE 1SS120
D704	8-719-912-20	DIODE 1SS120
D705	8-719-912-20	DIODE 1SS120
D706	8-719-912-20	DIODE 1SS120
D707	8-719-200-77	DIODE 10E2N
D708	8-719-933-33	DIODE HZS6A1L
D709	8-719-933-33	DIODE HZS6A1L
D710	8-719-912-20	DIODE 1SS120
D711	8-719-912-20	DIODE 1SS120
D712	8-719-912-20	DIODE 1SS120
D801	8-719-200-77	DIODE 10E2N
D802	8-719-200-77	DIODE 10E2N
D803	8-719-200-77	DIODE 10E2N
D804	8-719-200-77	DIODE 10E2N
D805	8-719-933-33	DIODE HZS6A1L
D806	8-719-933-33	DIODE HZS6A1L

Ref. No.	Part No.	Description	Remark
D807	8-719-912-20	DIODE 1SS120	
D808	8-719-200-77	DIODE 10E2N (K677ES FORMER TYPE)	
D812	8-719-912-20	DIODE 1SS120	
D813	8-719-200-31	DIODE 210Q05 (K570/K670/K677ES NEW TYPE)	
D813	8-719-200-77	DIODE 10E2N (K677ES FORMER TYPE)	
D814	8-719-933-43	DIODE HZS7A1L	
D815	8-719-912-20	DIODE 1SS120	
D816	8-719-912-20	DIODE 1SS120	
D817	8-719-001-70	DIODE UZL-12M1	
D818	8-719-200-77	DIODE 10E2N	
D819	8-719-200-77	DIODE 10E2N	
D820	8-719-000-93	DIODE UZL-7H1	
D822	8-719-912-20	DIODE 1SS120	
D823	8-719-312-09	DIODE RBA-402	(K570/K670/K677ES NEW TYPE)

< IC >

IC501	8-752-035-94	IC CXA1331S
IC502	8-759-000-49	IC MC14066BCP
IC521	8-759-111-44	IC uPC4570C-1
IC531	8-752-035-94	IC CXA1331S
IC541	8-752-038-02	IC CXA1198AP
IC551	8-759-634-51	IC M5218AP
IC561	8-759-945-58	IC RC4558P
IC562	8-759-945-58	IC RC4558P
IC581	8-759-106-56	IC uPC1297CA
IC701	8-759-635-71	IC M50941-483SP
IC702	8-759-240-69	IC TC4069UBP
IC703	8-759-973-95	IC BA6219B
IC704	8-759-822-09	IC LB1641
IC801	8-759-945-58	IC RC4558P

< JACK >

J501	1-565-320-11	JACK, PIN 6P (K570/K670)
J501	1-565-320-61	JACK, PIN 6P (LINE IN/LINE OUT / CD DIRECT IN) (K677ES)
J551	1-507-796-71	JACK (HEADPHONES)

< COIL >

L121	1-410-778-11	INDUCTOR	18mH
L141	1-410-780-11	INDUCTOR	27mH
L221	1-410-778-11	INDUCTOR	18mH
L241	1-410-780-11	INDUCTOR	27mH
L501	1-408-080-00	INDUCTOR	100uH

(K570/K670/K677ES NEW TYPE)

< FILTER >

LPF101	1-236-147-11	FILTER, LOW PASS
LPF201	1-236-147-11	FILTER, LOW PASS

MAIN(A)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark				
< TRANSISTOR >											
Q101	8-729-900-80	TRANSISTOR DTC114ES		Q756	8-729-900-61	TRANSISTOR DTA114ES					
Q102	8-729-142-25	TRANSISTOR 2SD1020-HFE		Q757	8-729-900-61	TRANSISTOR DTA114ES					
Q121	8-729-900-74	TRANSISTOR DTC143TS		Q758	8-729-900-61	TRANSISTOR DTA114ES					
Q141	8-729-620-05	TRANSISTOR 2SC2603-EF		Q801	8-729-900-61	TRANSISTOR DTA114ES					
Q201	8-729-900-80	TRANSISTOR DTC114ES		Q802	8-729-900-80	TRANSISTOR DTC114ES					
Q202	8-729-142-25	TRANSISTOR 2SD1020-HFE		Q803	8-729-924-90	TRANSISTOR 2SB1370-EF					
Q221	8-729-900-74	TRANSISTOR DTC143TS		Q804	8-729-111-55	TRANSISTOR 2SD1312-K					
Q241	8-729-620-05	TRANSISTOR 2SC2603-EF		Q805	8-729-111-55	TRANSISTOR 2SD1312-K					
Q501	8-729-900-65	TRANSISTOR DTA144ES		Q806	8-729-620-05	TRANSISTOR 2SC2603-EF					
Q502	8-729-900-89	TRANSISTOR DTC144ES		Q807	8-729-900-80	TRANSISTOR DTC114ES					
Q503	8-729-900-65	TRANSISTOR DTA144ES		Q808	8-729-924-90	TRANSISTOR 2SB1370-EF					
Q504	8-729-900-80	TRANSISTOR DTC114ES		Q809	8-729-620-05	TRANSISTOR 2SC2603-EF					
Q505	8-729-900-65	TRANSISTOR DTA144ES		Q810	8-729-119-76	TRANSISTOR 2SA1175-HFE					
Q506	8-729-142-25	TRANSISTOR 2SD1020-HFE (K670/K677ES)		Q811	8-729-140-04	TRANSISTOR 2SB1116A-L					
Q541	8-729-900-74	TRANSISTOR DTC143TS		< RESISTOR >							
Q542	8-729-900-74	TRANSISTOR DTC143TS		R101	1-259-460-11	CARBON	22K	5%	1/6W		
Q543	8-729-900-74	TRANSISTOR DTC143TS		R102	1-259-484-11	CARBON	220K	5%	1/6W		
Q561	8-729-119-76	TRANSISTOR 2SA1175-HFE		R103	1-249-429-11	CARBON	10K	5%	1/4W		
Q581	8-729-821-04	TRANSISTOR 2SA1317-STU		R104	1-259-440-11	CARBON	3.3K	5%	1/6W		
Q582	8-729-900-80	TRANSISTOR DTC114ES		R105	1-259-450-11	CARBON	8.2K	5%	1/6W		
Q583	8-729-900-80	TRANSISTOR DTC114ES		R106	1-259-461-11	CARBON	24K	5%	1/6W		
Q584	8-729-900-80	TRANSISTOR DTC114ES		R107	1-259-422-11	CARBON	560	5%	1/6W		
Q585	8-729-194-57	TRANSISTOR 2SC945-P		R108	1-259-476-11	CARBON	100K	5%	1/6W		
Q586	8-729-194-57	TRANSISTOR 2SC945-P		R109	1-259-436-11	CARBON	2.2K	5%	1/6W		
Q701	8-729-900-61	TRANSISTOR DTA114ES		R110	1-249-421-11	CARBON	2.2K	5%	1/4W		
Q702	8-729-900-61	TRANSISTOR DTA114ES		R111	1-259-458-11	CARBON	18K	5%	1/6W		
Q703	8-729-900-61	TRANSISTOR DTA114ES		R112	1-259-428-11	CARBON	1K	5%	1/6W		
Q704	8-729-900-61	TRANSISTOR DTA114ES		R113	1-259-460-11	CARBON	22K	5%	1/6W		
Q705	8-729-119-76	TRANSISTOR 2SA1175-HFE		R114	1-259-469-11	CARBON	51K	5%	1/6W		
Q706	8-729-119-76	TRANSISTOR 2SA1175-HFE		R115	1-249-421-11	CARBON	2.2K	5%	1/4W		
Q707	8-729-900-61	TRANSISTOR DTA114ES		R121	1-259-466-11	CARBON	39K	5%	1/6W (K677ES)		
Q708	8-729-900-61	TRANSISTOR DTA114ES		R121	1-259-476-11	CARBON	100K	5%	1/6W (K670/K670)		
Q709	8-729-620-05	TRANSISTOR 2SC2603-EF		R122	1-259-402-11	CARBON	82	5%	1/6W		
Q710	8-729-900-80	TRANSISTOR DTC114ES		R123	1-259-479-11	CARBON	130K	5%	1/6W		
Q711	8-729-900-65	TRANSISTOR DTA144ES		R124	1-259-446-11	CARBON	5.6K	5%	1/6W		
Q712	8-729-900-80	TRANSISTOR DTC114ES		R125	1-259-434-11	CARBON	1.8K	5%	1/6W		
Q713	8-729-900-65	TRANSISTOR DTA144ES		R126	1-259-435-11	CARBON	2K	5%	1/6W		
Q714	8-729-620-05	TRANSISTOR 2SC2603-EF		R127	1-259-484-11	CARBON	220K	5%	1/6W		
Q715	8-729-900-89	TRANSISTOR DTC144ES		R131	1-249-429-11	CARBON	10K	5%	1/4W		
Q716	8-729-900-89	TRANSISTOR DTC144ES		R132	1-249-429-11	CARBON	10K	5%	1/4W		
Q717	8-729-900-61	TRANSISTOR DTA114ES		R133	1-249-429-11	CARBON	10K	5%	1/4W		
Q751	8-729-900-61	TRANSISTOR DTA114ES		R134	1-259-461-11	CARBON	24K	5%	1/6W		
Q753	8-729-900-61	TRANSISTOR DTA114ES		R135	1-259-422-11	CARBON	560	5%	1/6W		
Q754	8-729-900-61	TRANSISTOR DTA114ES		R136	1-259-452-11	CARBON	10K	5%	1/6W		
Q755	8-729-900-61	TRANSISTOR DTA114ES		R137	1-259-476-11	CARBON	100K	5%	1/6W		
				R141	1-259-444-11	CARBON	4.7K	5%	1/6W (K670/K677ES)		
				R142	1-259-442-11	CARBON	3.9K	5%	1/6W		

MAIN(A)

Ref. No.	Part No.	Description	Remark		Ref. No.	Part No.	Description	Remark			
R143	1-259-440-11	CARBON	3.3K	5%	1/6W	R235	1-259-422-11	CARBON	560	5%	1/6W
R144	1-259-452-11	CARBON	10K	5%	1/6W	R236	1-259-452-11	CARBON	10K	5%	1/6W
R145	1-249-421-11	CARBON	2.2K	5%	1/4W	R237	1-259-476-11	CARBON	100K	5%	1/6W
R146	1-259-444-11	CARBON	4.7K	5%	1/6W	R241	1-259-444-11	CARBON	4.7K	5%	1/6W (K670/K677ES)
R151	1-249-433-11	CARBON	22K	5%	1/4W	R242	1-259-442-11	CARBON	3.9K	5%	1/6W
R152	1-249-421-11	CARBON	2.2K	5%	1/4W	R243	1-259-440-11	CARBON	3.3K	5%	1/6W
R153	1-247-862-11	CARBON	20K	5%	1/4W	R244	1-259-452-11	CARBON	10K	5%	1/6W
R154	1-249-409-11	CARBON	220	5%	1/4W	R245	1-249-421-11	CARBON	2.2K	5%	1/4W
R161	1-249-434-11	CARBON	27K	5%	1/4W	R246	1-259-444-11	CARBON	4.7K	5%	1/6W
R162	1-247-866-11	CARBON	30K	5%	1/4W	R251	1-249-433-11	CARBON	22K	5%	1/4W
R163	1-249-436-11	CARBON	39K	5%	1/4W	R252	1-249-421-11	CARBON	2.2K	5%	1/4W
R164	1-249-409-11	CARBON	220	5%	1/4W	R253	1-247-862-11	CARBON	20K	5%	1/4W
R181	1-249-432-11	CARBON	18K	5%	1/4W	R254	1-249-409-11	CARBON	220	5%	1/4W
R182	1-249-435-11	CARBON	33K	5%	1/4W	R261	1-249-434-11	CARBON	27K	5%	1/4W
R183	△ 1-219-153-11	FUSIBLE (K570/K670/K677ES NEW TYPE)	10	5%	1/4W F	R262	1-247-866-11	CARBON	30K	5%	1/4W
R183	1-249-393-11	CARBON (K677ES FORMER TYPE)	10	5%	1/4W	R263	1-249-436-11	CARBON	39K	5%	1/4W
R184	1-247-883-00	CARBON	150K	5%	1/4W	R264	1-249-409-11	CARBON	220	5%	1/4W
R201	1-259-460-11	CARBON	22K	5%	1/6W	R281	1-249-432-11	CARBON	18K	5%	1/4W
R202	1-259-484-11	CARBON	220K	5%	1/6W	R282	1-249-435-11	CARBON	33K	5%	1/4W
R203	1-249-429-11	CARBON	10K	5%	1/4W	R283	△ 1-219-153-11	FUSIBLE (K570/K670/K677ES NEW TYPE)	10	5%	1/4W F (K570/K670/K677ES NEW TYPE)
R204	1-259-440-11	CARBON	3.3K	5%	1/6W	R283	1-249-393-11	CARBON (K677ES FORMER TYPE)	10	5%	1/4W (K677ES FORMER TYPE)
R205	1-259-450-11	CARBON	8.2K	5%	1/6W	R284	1-247-883-00	CARBON	150K	5%	1/4W
R206	1-259-461-11	CARBON	24K	5%	1/6W	R501	1-259-428-11	CARBON	1K	5%	1/6W
R207	1-259-422-11	CARBON	560	5%	1/6W	R502	1-215-455-00	METAL	27K	1%	1/6W
R208	1-259-476-11	CARBON	100K	5%	1/6W	R503	1-249-421-11	CARBON	2.2K	5%	1/4W
R209	1-259-436-11	CARBON	2.2K	5%	1/6W	R504	1-249-421-11	CARBON	2.2K	5%	1/4W
R210	1-249-421-11	CARBON	2.2K	5%	1/4W	R505	1-249-427-11	CARBON	6.8K	5%	1/4W (K670/K677ES)
R211	1-259-458-11	CARBON	18K	5%	1/6W	R506	1-249-381-11	CARBON	1	5%	1/4W (K670/K677ES)
R212	1-259-428-11	CARBON	1K	5%	1/6W	R521	1-247-704-11	CARBON	220	5%	1/4W
R213	1-259-460-11	CARBON	22K	5%	1/6W	R522	1-247-704-11	CARBON	220	5%	1/4W
R214	1-259-469-11	CARBON	51K	5%	1/6W	R531	1-259-428-11	CARBON	1K	5%	1/6W
R215	1-249-421-11	CARBON	2.2K	5%	1/4W	R532	1-215-455-00	METAL	27K	1%	1/6W
R221	1-259-466-11	CARBON	39K	5%	1/6W (K677ES)	R533	1-249-437-11	CARBON	47K	5%	1/4W
R221	1-259-476-11	CARBON	100K	5%	1/6W (K570/K670)	R541	1-249-441-11	CARBON	100K	5%	1/4W
R222	1-259-402-11	CARBON	82	5%	1/6W	R543	1-215-454-00	METAL	24K	1%	1/6W
R223	1-259-479-11	CARBON	130K	5%	1/6W	R563	1-249-441-11	CARBON	100K	5%	1/4W
R224	1-259-446-11	CARBON	5.6K	5%	1/6W	R564	1-249-429-11	CARBON	10K	5%	1/4W
R225	1-259-434-11	CARBON	1.8K	5%	1/6W	R565	1-249-441-11	CARBON	100K	5%	1/4W
R226	1-259-435-11	CARBON	2K	5%	1/6W	R566	1-249-428-11	CARBON	8.2K	5%	1/4W
R227	1-259-484-11	CARBON	220K	5%	1/6W	R567	1-249-441-11	CARBON	100K	5%	1/4W
R231	1-249-429-11	CARBON	10K	5%	1/4W	R568	1-249-423-11	CARBON	3.3K	5%	1/4W
R232	1-249-429-11	CARBON	10K	5%	1/4W	R569	1-249-441-11	CARBON	100K	5%	1/4W
R233	1-249-429-11	CARBON	10K	5%	1/4W	R570	1-249-429-11	CARBON	10K	5%	1/4W
R234	1-259-461-11	CARBON	24K	5%	1/6W	R571	1-249-429-11	CARBON	10K	5%	1/4W
						R572	1-249-417-11	CARBON	1K	5%	1/4W
						R581	1-249-429-11	CARBON	10K	5%	1/4W
						R582	1-249-429-11	CARBON	10K	5%	1/4W

Note:
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

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MAIN(A)

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R583	1-247-838-11	CARBON	2K (K570/K670)	R613	1-247-876-11	CARBON	75K 5% 1/4W
R583	1-247-842-11	CARBON	3K 5% 1/4W (K677ES)	R614	1-247-872-11	CARBON	51K 5% 1/4W
R584	1-249-425-11	CARBON	4.7K 5% 1/4W (K570/K670)	R615	1-247-874-11	CARBON	62K 5% 1/4W (K677ES)
R584	1-249-427-11	CARBON	6.8K 5% 1/4W (K677ES)	R615	1-247-886-11	CARBON	200K 5% 1/4W (K570/K670)
R585	1-249-437-11	CARBON	47K 5% 1/4W	R616	1-247-874-11	CARBON	62K 5% 1/4W (K570/K670)
R586	1-249-424-11	CARBON	3.9K 5% 1/4W (K570/K670)	R616	1-249-437-11	CARBON	47K 5% 1/4W (K677ES)
R586	1-249-425-11	CARBON	4.7K 5% 1/4W (K677ES)	R617	1-247-874-11	CARBON	62K 5% 1/4W (K570/K670)
R587	1-249-436-11	CARBON	39K 5% 1/4W (K670/K677ES)	R617	1-249-441-11	CARBON	100K 5% 1/4W (K677ES)
R587	1-249-440-11	CARBON	82K 5% 1/4W (K570)	R618	1-247-885-00	CARBON	180K 5% 1/4W (K677ES)
R588	1-249-436-11	CARBON	39K 5% 1/4W (K670/K677ES)	R618	1-247-886-11	CARBON	200K 5% 1/4W (K570/K670)
R588	1-249-440-11	CARBON	82K 5% 1/4W (K570)	R701	1-247-887-00	CARBON	220K 5% 1/4W
R589	1-249-390-11	CARBON	5.6 5% 1/4W (K570)	R702	1-247-887-00	CARBON	220K 5% 1/4W
R589	1-249-391-11	CARBON	6.8 5% 1/4W (K670/K677ES)	R703	1-249-436-11	CARBON	39K 5% 1/4W
R590	1-249-390-11	CARBON	5.6 5% 1/4W (K570)	R704	1-247-887-00	CARBON	220K 5% 1/4W
R590	1-249-391-11	CARBON	6.8 5% 1/4W (K670/K677ES)	R705	1-249-436-11	CARBON	39K 5% 1/4W
R591	1-249-435-11	CARBON	33K 5% 1/4W	R706	1-247-887-00	CARBON	220K 5% 1/4W
R592	1-249-423-11	CARBON	3.3K 5% 1/4W	R707	1-249-431-11	CARBON	15K 5% 1/4W
R601	1-247-876-11	CARBON	75K 5% 1/4W (K570/K670)	R708	1-247-868-11	CARBON	36K 5% 1/4W
R601	1-249-439-11	CARBON	68K 5% 1/4W (K677ES)	R709	1-249-435-11	CARBON	33K 5% 1/4W
R602	1-249-435-11	CARBON	33K 5% 1/4W	R710	1-249-435-11	CARBON	33K 5% 1/4W
R603	1-247-870-11	CARBON	43K 5% 1/4W (K570/K670)	R711	1-247-872-11	CARBON	51K 5% 1/4W
R603	1-247-876-11	CARBON	75K 5% 1/4W (K677ES)	R712	1-249-435-11	CARBON	33K 5% 1/4W
R604	1-247-439-11	CARBON	68K 5% 1/4W (K570/K670)	R713	1-249-435-11	CARBON	33K 5% 1/4W
R604	1-249-441-11	CARBON	100K 5% 1/4W (K677ES)	R714	1-249-435-11	CARBON	33K 5% 1/4W
R605	1-247-874-11	CARBON	62K 5% 1/4W (K677ES)	R715	1-249-435-11	CARBON	33K 5% 1/4W
R605	1-247-878-00	CARBON	91K 5% 1/4W (K570/K670)	R716	1-249-435-11	CARBON	33K 5% 1/4W
R606	1-249-433-11	CARBON	22K 5% 1/4W (K570/K670)	R717	1-249-435-11	CARBON	33K 5% 1/4W
R606	1-249-434-11	CARBON	27K 5% 1/4W (K677ES)	R718	1-249-435-11	CARBON	33K 5% 1/4W
R607	1-247-874-11	CARBON	62K 5% 1/4W	R719	1-249-435-11	CARBON	33K 5% 1/4W
R608	1-249-437-11	CARBON	47K 5% 1/4W	R720	△ 1-212-954-11	FUSIBLE	6.8 5% 1/2W F
R609	1-247-880-11	CARBON	110K 5% 1/4W (K570/K670)	R721	1-249-429-11	CARBON	10K 5% 1/4W
R609	1-247-882-00	CARBON	130K 5% 1/4W (K677ES)	R722	1-249-431-11	CARBON	15K 5% 1/4W
R610	1-247-874-11	CARBON	62K 5% 1/4W (K570/K670)	R723	1-247-834-11	CARBON	1.3K 5% 1/4W
R610	1-249-441-11	CARBON	100K 5% 1/4W (K677ES)	R724	1-249-424-11	CARBON	3.9K 5% 1/4W
R611	1-247-874-11	CARBON	62K 5% 1/4W (K677ES)	R725	1-247-834-11	CARBON	1.3K 5% 1/4W
R611	1-247-878-11	CARBON	91K 5% 1/4W (K570/K670)	R726	1-249-427-11	CARBON	6.8K 5% 1/4W
R612	1-247-886-11	CARBON	200K 5% 1/4W (K677ES)	R727	1-249-430-11	CARBON	12K 5% 1/4W
R612	1-247-887-11	CARBON	220K 5% 1/4W (K570/K670)	R728	△ 1-212-952-00	FUSIBLE	5.6 5% 1/2W F
				R729	1-249-435-11	CARBON	33K 5% 1/4W
				R730	1-249-435-11	CARBON	33K 5% 1/4W
				R731	1-249-425-11	CARBON	4.7K 5% 1/4W
				R732	1-249-417-11	CARBON	1K 5% 1/4W
				R733	1-247-903-00	CARBON	1M 5% 1/4W
				R734	1-249-429-11	CARBON	10K 5% 1/4W
				R735	1-249-421-11	CARBON	2.2K 5% 1/4W

Note:

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Note:

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MAIN(A) REAL MOTOR

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark			
R736	△ 1-212-938-00	FUSIBLE	1.5	5%	1/2W	F (K570/K670/K677ES NEW TYPE)						
R752	1-249-441-11	CARBON	100K	5%	1/4W		S501	1-572-154-11	SWITCH, ROTARY (DOLBY NR)			
R753	1-249-441-11	CARBON	100K	5%	1/4W		S502	1-554-118-00	SWITCH, PUSH (1 KEY) (MPX FILTER)			
R754	1-249-441-11	CARBON	100K	5%	1/4W		S503	1-572-708-11	SWITCH, ROTARY (INPUT)			
R756	1-249-441-11	CARBON	100K	5%	1/4W		S763	1-571-520-11	SWITCH, SLIDE (TIMER)			
R757	1-249-441-11	CARBON	100K	5%	1/4W		S801	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)			
R758	1-249-441-11	CARBON	100K	5%	1/4W							
R774	1-249-422-11	CARBON	2.7K	5%	1/4W							
R775	1-249-424-11	CARBON	3.9K	5%	1/4W							
R802	1-249-425-11	CARBON	4.7K	5%	1/4W							
R803	1-249-420-11	CARBON	1.8K	5%	1/4W		T181	1-433-344-11	TRANSFORMER, BIAS OSCILLATION			
R804	1-249-412-11	CARBON	390	5%	1/4W		T281	1-433-344-11	TRANSFORMER, BIAS OSCILLATION			
R805	1-249-427-11	CARBON	6.8K	5%	1/4W		T581	1-433-343-11	TRANSFORMER, BIAS OSCILLATION (K570)			
R806	1-249-419-11	CARBON	1.5K	5%	1/4W		T581	1-433-380-11	TRANSFORMER, BIAS OSCILLATION (K670/K677ES)			
R807	1-259-452-11	CARBON	10K	5%	1/6W							
R808	1-259-432-11	CARBON	1.5K	5%	1/6W							
R809	1-249-425-11	CARBON	4.7K	5%	1/4W		X701	1-577-359-21	VIBRATOR, CERAMIC 4.19MHz			
R810	1-249-409-11	CARBON	220	5%	1/4W							
R811	1-259-428-11	CARBON	1K	5%	1/6W							
R812	1-259-448-11	CARBON	6.8K	5%	1/6W							
R813	1-259-448-11	CARBON	6.8K	5%	1/6W							
R814	1-249-417-11	CARBON	1K	5%	1/4W							
R815	1-249-425-11	CARBON	4.7K	5%	1/4W							
R816	1-249-425-11	CARBON	4.7K	5%	1/4W		C1051	1-124-907-11	ELECT	10uF	20%	50V
R817	1-249-425-11	CARBON	4.7K	5%	1/4W		C1052	1-124-907-11	ELECT	10uF	20%	50V
R818	1-249-433-11	CARBON	22K	5%	1/4W		C1053	1-164-159-11	CERAMIC	0.1uF		50V
R819	1-249-436-11	CARBON	39K	5%	1/4W							
R820	1-249-429-11	CARBON	10K	5%	1/4W							
R821	1-249-437-11	CARBON	47K	5%	1/4W							
R825	△ 1-219-135-11	FUSIBLE	0.15	10%	1/4W	(K570/K670/K677ES NEW TYPE)						
R826	△ 1-219-137-11	FUSIBLE	0.33	10%	1/4W	(K570/K670/K677ES NEW TYPE)						
< VARIABLE RESISTOR >												
RV121	1-238-015-11	RES, ADJ, CARBON	4.7K									
RV141	1-238-017-11	RES, ADJ, CARBON	22K									
RV181	1-238-017-11	RES, ADJ, CARBON	22K									
RV221	1-238-015-11	RES, ADJ, CARBON	4.7K									
RV241	1-238-017-11	RES, ADJ, CARBON	22K									
RV281	1-238-017-11	RES, ADJ, CARBON	22K									
RV501	1-241-403-11	RES, VAR, CARBON	50K/50K	(REC LEVEL)								
RV502	1-238-904-11	RES, VAR, CARBON	50K/50K	(BALANCE)								
RV503	1-241-404-11	RES, VAR, CARBON	5K/5K	(CALIBRATION REC LEVEL)	(K670/K677ES)							
RV504	1-238-015-11	RES, ADJ, CARBON	4.7K	(K670/K677ES)								
RV551	1-238-085-11	REA, VAR, CARBON	20K/20K	(PHONE LEVEL)								
RV581	1-241-046-11	RES, VAR, CARBON	5K	(BIAS)								

Note: The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.		Note: Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.										

Ref. No.	Part No.	Description	Remark
MISCELLANEOUS			

11	1-569-007-11	ADAPTOR, CONVERSION 2P (K570:E3)	
12	△ 1-551-188-XX	CORD, POWER (K570:E)	
12	△ 1-551-506-XX	CORD, POWER (K570:Canadian/ K677ES:US, Canadian)	
12	△ 1-555-465-00	CORD, POWER (K670:US)	
12	△ 1-555-795-00	CORD, POWER, EUO PLUG (K570:AEP, G/ K670:AEP, G)	
12	△ 1-556-035-00	CORD, POWER (K570:UK/K677ES:UK)	
125	* 1-608-268-00	PC BOARD, ERASE HEAD (K670/K677ES)	
D1051	8-719-980-85	DIODE SLF-325C	
HE1001	1-543-535-11	HEAD, MAGNETIC (ERASE) (K570)	
HE1001	1-543-836-11	HEAD, MAGNETIC (ERASE) (K670/K677ES)	
HRP1001	1-543-733-11	HEAD, MAGNETIC (REC/PB) (K570)	
HRP1001	1-543-834-11	HEAD, MAGNETIC (REC/PB) (K670)	
HRP1001	1-543-835-11	HEAD, MAGNETIC (REC/PB) (K677ES)	
M1051	X-3356-638-1	MOTOR (REEL R) ASSY	
M1052	X-3356-604-1	MOTOR (ASSIST) ASSY	
M1053	X-3356-635-1	MOTOR (CAPSTAN R2) ASSY (K670/K677ES)	
M1053	X-3356-646-1	MOTOR (CAPSTAN V1) ASSY (K570)	
S1001	1-466-238-11	ENCODER, ROTARY	
T901	△ 1-450-100-11	TRANSFORMER, POWER (K570:Canadian/ K670:US/K677ES:US, Canadian)	
T901	△ 1-450-101-11	TRANSFORMER, POWER (K570:E)	
T901	△ 1-450-399-11	TRANSFORMER, POWER (K570:AEP, G, UK/ K670:AEP, G/K677ES:UK)	
VS901	△ 1-570-307-11	SWITCH, VOLTAGE CHANGE (K570:E)	

ACCESSORY & PACKING MATERIAL

1-559-533-11	CORD, CONNECTION
* 3-350-830-01	CUSHION
* 3-366-700-41	INDIVIDUAL CARTON (K677ES)
* 3-366-700-51	INDIVIDUAL CARTON (K670)
* 3-366-700-61	INDIVIDUAL CARTON (K570)
3-703-450-01	INSTRUCTION (K670:US/K677ES:US)
* 3-704-343-01	HEET (STANDARD), PROTECTION
3-753-218-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (K677ES)
3-753-363-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE)(K670:AEP)
3-753-363-21	MANUAL, INSTRUCTION (ENGLISH) (K670:US)
3-753-363-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN)(K670:AEP)
3-753-363-51	MANUAL, INSTRUCTION (GERMAN) (K670:G)
3-753-366-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (K570:Canadian, AEP, UK)
3-753-366-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (K570:AEP)
3-753-366-51	MANUAL, INSTRUCTION (GERMAN) (K570:G)
3-753-366-61	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, CHINESE) (K570:E)
3-793-481-13	INSTRUCTION (K670/K677ES)

Ref. No.	Part No.	Description	Remark
HARDWARE LIST			

# 1	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S
# 2	7-682-547-04	SCREW +BVTT 3X6 (S)
# 3	7-685-646-79	SCREW +BVTT 3X8 TYPE2 N-S
# 4	7-685-870-01	SCREW +BVTT 3X5 (S) (K670/K677ES)
# 5	7-671-154-01	STENLESS BALL (K670/K677ES)
# 6	7-628-253-00	SCREW +PS 2X4 (K670/K677ES)
# 7	7-685-133-19	SCREW +BTP 2.6X6 TYPE2 N-S
# 8	7-621-255-20	SCREW +BVTT 2X4 (S)
# 9	7-621-772-20	SCREW +B 2X5 (K570)
#10	7-621-772-70	SCREW +B 2X14 (K670/K677ES)
#11	7-622-205-05	NUT M2 TYPE2 (K670/K677ES)
#12	7-621-772-18	SCREW +B 2X4 (K670/K677ES)
#13	7-621-775-10	SCREW +B 2.6X4 (K670/K677ES)
#14	7-621-255-35	SCREW +BVTT 2X5 (S)
#15	7-685-132-19	SCREW +BTP 2.6X5 TYPE2 N-S (K570)
#16	7-682-647-09	SCREW +PS 3X6 (K670/K677ES)

Note:
The components identified by mark ▲ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ▲ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

**Sony Corporation
Audio Group**

9-956-350-11

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TC-K570/K670/K677ES

SONY® SERVICE MANUAL

Canadian Model

AEP Model

UK Model

E Model

Australian Model

TC-K570

SUPPLEMENT-1

File this supplement with the service manual.

US Model

AEP Model

TC-K670

US Model

Canadian Model

UK Model

Australian Model

TC-K677ES

For the TC-K570 and TC-677ES Service Manual released
Previously, the Australian Model is added.
Please utilize it since its contents are same as those
of UK Model.

TC-K570/K670/K677ES

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 : indicates corrected portion.

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
29	8	3-367-791-01	PANEL, BACK (K670 : US)	3-367-971-01	PANEL, BACK (K670 : US)
	8	3-367-791-11	PANEL, BACK (K670 : AEP, G)	3-367-971-21	PANEL, BACK (K670 : AEP, G)
	8	3-367-792-01	PANEL, BACK (K570 : AEP, G)	3-367-972-11	PANEL, BACK (K570 : AEP, G)
	8	3-367-792-21	PANEL, BACK (K570 : UK)	3-367-972-21	PANEL, BACK (K570 : UK)
	8	3-367-792-31	PANEL, BACK (K570 : Canadian)	3-367-972-31	PANEL, BACK (K570 : Canadian)
	8	3-367-792-41	PANEL, BACK (K570 : E)	3-367-972-41	PANEL, BACK (K570 : E)

TC-K570/K670/K677ES

SONY. SERVICE MANUAL

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AEP Model
UK Model
E Model
TC-K570

US Model
AEP Model
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US Model
Canadian Model
UK Model
TC-K677ES

CORRECTION- 2

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT			CORRECT		
	No.	Part No.	Description	No.	Part No.	Description
29	125	3-564-121-00	SPRING, COMPRESSION (K670/K677ES)	127	3-567-121-00	SPRING, COMPRESSION (K670/K677ES)

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US Model
AEP Model
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US Model
Canadian Model
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TC-K677ES

 : indicates corrected portion.

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
29	8	3-367-791-01	PANEL, BACK (K670 : US)	3-367-971-01	PANEL, BACK (K670 : US)
	8	3-367-791-11	PANEL, BACK (K670 : AEP, G)	3-367-971-21	PANEL, BACK (K670 : AEP, G)
	8	3-367-792-01	PANEL, BACK (K570 : AEP, G)	3-367-972-11	PANEL, BACK (K570 : AEP, G)
	8	3-367-792-21	PANEL, BACK (K570 : UK)	3-367-972-21	PANEL, BACK (K570 : UK)
	8	3-367-792-31	PANEL, BACK (K570 : Canadian)	3-367-972-31	PANEL, BACK (K570 : Canadian)
	8	3-367-792-41	PANEL, BACK (K570 : E)	3-367-972-41	PANEL, BACK (K570 : E)

TC-K570/K670/K677ES

SONY SERVICE MANUAL

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AEP Model
UK Model
E Model
TC-K570

US Model
AEP Model
TC-K670

US Model
Canadian Model
UK Model
TC-K677ES

CORRECTION- 2

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 : indicates corrected portion.

Page	INCORRECT			CORRECT		
	No.	Part No.	Description	No.	Part No.	Description
29	125	3-564-121-00	SPRING, COMPRESSION (K670/K677ES)	127	3-567-121-00	SPRING, COMPRESSION (K670/K677ES)